# 2011
STATE *of* INFORMATION TECHNOLOGY
in Missouri

PREFACE

In accordance with Executive Order 06-34 this *2011 State of Information Technology in Missouri* has been prepared for consideration in the state's budget process.

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Web & Application Development

INTRODUCTION

This report, the *2011 State of Information Technology* in Missouri is provided by the Information Technology Services Division (ITSD), a part of the Office of Administration (OA).

ITSD is the information technology unit for nearly all of the state government agencies that are under the umbrella of Missouri's 14 consolidated departments. ITSD also provides network services to all other Missouri state government agencies.

ITSD works with state agencies to answer Gov. Nixon's call for more effective and efficient government operations. Gov. Nixon has also emphasized the importance of delivering more online services and higher quality websites to Missouri's citizens.

Within ITSD, consolidation along functional units has also allowed the State to reduce average costs for a number of services. Consolidation has allowed ITSD to leverage knowledge sharing and collaboration among IT professionals for improved service. Solving problems once for the enterprise as opposed to numerous times for individual agencies is obviously a good thing.

ITSD is also undertaking several technology initiatives with vendor-partners that will create efficiencies in state government. Among these initiatives are Unified Communications, Server Virtualization, and Desktop Virtualization. In addition, ITSD is currently investigating how the deployment of mobile devices and mobile applications could generate efficiencies and cost savings for state agencies.

The report includes an overview of each of ITSD's functional areas and also a discussion of each of the 14 web and application development teams that support the consolidated departments. The report does not provide a complete discussion of any organization's technology systems, 2011 accomplishments or pending projects. That is beyond the scope of this document.

Web and application development by ITSD and contracted state vendors is undertaken to support the missions and specific business objectives of those agencies, and any discussion of that development should include an understanding of the agency. In addition, success in web and application development can only be achieved through strong partnerships and collaboration between ITSD and agency stakeholders.

There are information technology units outside consolidation that provide support for the Department of Transportation, Department of Conservation, certain elected officials, Missouri's Courts and Missouri's Legislature. These non-consolidated units provide valuable IT services to the State of Missouri, but have not been included in this report.

RESPONDING TO NATURAL DISASTERS IN MISSOURI

Missourians endured several natural disasters in 2011. During each incident, ITSD was ready to provide technical assistance to the Department of Public Safety (DPS), the State Emergency Management Agency (SEMA) and other state agencies as they responded to help victims.

JOPLIN TORNADO

On the evening of May 22, 2011, a devastating EF5 tornado struck Joplin, Missouri. Winds estimated at more than 200 mph wrecked havoc on families, homes, businesses and the city's infrastructure. Below are some examples of how ITSD and technology helped state agencies respond to this crisis effectively:

Support Tools
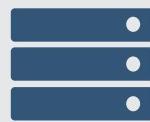
COMPUTERS   **PHONES**   **SERVERS**   **VIDEO**   **PRINTERS**

Joplin Career Center
ITSD installed network equipment, providing a secure private state network for additional computers, phones and printers at the Joplin Career Center. Additional cell phones were provided to the career center to help victims contact state assistance programs as well as family members and loved ones.

Missouri Southern State University
ITSD assisted Missouri Southern State University (MSSU) technology staff to re-establish network connectivity on hardwire and wireless networks. Computers and phones were installed on the MSSU campus, which enabled state agencies to provide assistance to tornado victims. Additionally, ITSD helped the Federal Emergency Management Agency (FEMA) and SEMA establish a temporary resource center on the MSSU campus.

Streaming the Joplin Memorial Service
On the Sunday following the tornado Gov. Nixon, President Obama and local clergy shared messages during a Joplin community memorial service at the Taylor Arts Center on the MSSU campus. ITSD helped design and install a system to provide a video stream of the Joplin memorial service. This video feed was used by television news stations to broadcast the service and was streamed

live on MO.gov. Additionally, ITSD established five viewing locations on campus, including a 9' x 12' outdoor screen that allowed over 7,000 people to participate in the service on campus.

Joplin Resource, Recovery and Rebuilding Center

Serving as a central location for numerous programs and agencies, the Joplin Resource, Recovery and Rebuilding Center provided victims with a one-stop shop for receiving state and federal assistance. ITSD staff installed network equipment including computers, printers, multi-function devices and IP phones at the center which established reliable and secure communication for tornado victims, agencies and assistance programs. ITSD staff also provided on-site and remote technical support to all agencies housed in the center.

Online Communication

Immediately after the tornado's impact, ITSD worked with state agencies to promote services that victims and their families could access online or find in Joplin. As information emerged and more resources, such as shelters, food stations and donation drop-off locations became available, ITSD worked with SEMA and other state agencies to update and maintain online content, ensuring accuracy and clarity. Information regarding all types of aid including federal assistance, housing, shelters and disaster unemployment assistance was given top priority on MO.gov.

MO.GOV 1-DAY HIGH	WEEK OF MAY 22-28	YEAR-END STAT
29,706	**49,192**	**79,489**
TOTAL VISITORS	TOTAL VISITORS	TOTAL VISITORS
MONDAY, MAY 23RD	*ON MO.GOV JOPLIN PAGES*	*ON MO.GOV JOPLIN PAGES*
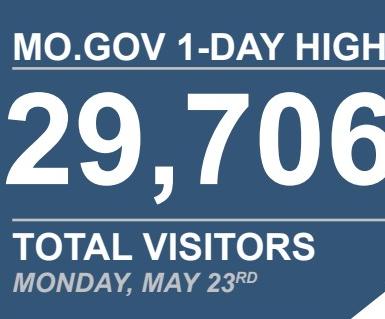
FLOODING IN MISSOURI

In response to the Spring 2011 flooding throughout Missouri, state agencies joined Gov. Nixon at Community Resource Meetings in Poplar Bluff, Sikeston, Charleston, New Madrid and Caruthersville. These meetings brought state assistance and resources directly to flood victims. The meetings facilitated face-to-face interaction with state officials and gave victims personal attention while applying for aid. ITSD provided state agencies with on-site technical support and services at each event and worked with ATT, Verizon and Sprint to provide phones and wireless data devices that helped victims connect with appropriate websites to register for assistance. ITSD also provided laptop computers at events that allowed flood victims to apply for assistance.

WEB COMMUNICATION

ITSD supported state agencies' efforts to aid flood victims by using the state citizen portal, MO.gov, as a hub for information about flooding in Missouri. MO.gov informed the public of assistance programs available to flood victims and much more.

Upon visiting MO.gov, Missourians could:
- Learn how to prepare for the pending flood and stay safe during and after the event
- Check river levels, flood predictions, road closures and travel conditions
- Find shelters using an interactive map
- Receive directions on filing for disaster unemployment assistance if they were unable to work due to flooding
- Learn about the Missouri Disaster Recovery Jobs Program, a program that provided temporary employment for restoring businesses and infrastructure in disaster areas
- Access information about available individual and public federal assistance
- Locate assistance for flood insurance claims
- Learn about federal disaster loans for homeowners, renters, businesses and private, non-profit organizations available from the Small Business Association
- Search for volunteer and donation opportunities to assist flood victims
- Track the day-to-day changes through news releases, photos, videos & social media updates

Between April 25 and June 1, 2011, pages on MO.gov related to flooding in southeast Missouri were viewed 16,692 times and ranked as the 8th most popular topic on MO.gov. In June, pages related to flood response efforts along the Missouri River were visited 19,165 times, the 6th-highest total of visits for June 2011.

MOBROADBANDNOW

MoBroadbandNow has seven core objectives including:

- ➤ Collecting and verifying data and information,
- ➤ Preparing comprehensive state and regional broadband maps,
- ➤ Establishing technology planning teams,
- ➤ Building new and leveraging existing relationships with broadband stakeholders,
- ➤ Providing technical assistance,
- ➤ Tracking the progress of infrastructure projects and providing transparency and
- ➤ Convening public forums and community outreach.

The initiative's first effort was partnering with data providers to identify under-served and unserved communities in the state. Through a competitive award process, funding was secured to design and build new broadband infrastructure. Missouri providers were awarded $261 million for 18 projects by the American Recovery and Reinvestment Act (ARRA) of 2009. The total value of these projects, including additional cash and in-kind support, is $311 million. Missourians have already begun reaping the benefits of improved high-speed service and more citizens will see faster, reliable connections in the future.

MoBroadbandNow is playing a critical role in expanding accessibility and adoption beyond the ARRA-awarded projects. In 2010, the initiative formed strategic partnerships and launched new pilot projects to strengthen Missouri's global competitiveness and public awareness for broad-band in every sector of the state.

Specific examples of progress include:
AgBroadbandNow: A collaborative pilot project with the United States Department of Agriculture (USDA) Missouri State Office, Missouri Department of Agriculture, professional agriculture and agri-business trade associations as well as individual farmers, ranchers, breeders and producers to expand broadband accessibility in one of Missouri's leading economic engines.

Online County: A collaborative project with the Missouri Association of Counties and the University of Missouri to develop and launch an online presence and interactive capability for over fifty (50) third-class counties without a website.

Ultra High-speed: Missouri is leading the nation in the deployment of broadband speeds beyond 100 megabits per second (Mbps) with several ultra high-speed initiatives. Businesses, research institutions, colleges and universities and even residential consumers are looking for service that pushes the boundaries of fiber-optic bandwith. MoBroadbandNow is actively engaged with the Google Fiber project in Kansas City, the first 1 gigabit network privately constructed in the country. In addition, MoBroadbandNow is closely following the progress of Gig.U and its partners, the University of Missouri and the City of Columbia, on building another one gigabit network for mid-Missouri and the flagship of the UM system. Finally, the St. Louis Cloud Coalition is developing a micro-1 gigabit network that may have successful replication models for many of Missouri's historic rural downtowns.

Library Central: A collaborative project with the public libraries to increase broadband accessibility and adoption. Public libraries often serve as the principal place of online usage in underserved and unserved communities. MoBroadbandNow survey data shows that public libraries are the secondary choice for online usage outside the home.

In 2011, MoBroadbandNow made significant progress in each of its core projects:

➤ **Ralls County Electric Cooperative** held a "light up" event in May 2011. This is one of the first ARRA awarded broadband projects to substantially complete construction and offer service to homes and businesses.

➤ **Big River Broadband** began renovation of the Farmington fire station as its new broadband office. The company is committed to hiring Missourians for jobs throughout the broadband organization.

➤ **Show-Me Technologies** completed three phases of its middle mile network and completed connection to several key community anchor institutions including the Missouri State Fairgrounds, Sedalia School District and the Jefferson City Medical Group.

➤ **Socket** broke ground in Millersburg in October 2011 to begin construction of more than 3,000 passings.

➤ **Co-Mo Electric Cooperative**, which was not an ARRA award winner but is an active MoBroadbandNow participant, completed construction of two pilot projects that are completely self-funded, serving as a business model for other broadband projects beyond the ARRA funded projects.

➤ Public computing centers at six (6) community college systems are complete and open to the community.

➤ MoBroadbandNow completed a comprehensive broadband-needs assessment, collecting the largest survey of residential broadband usage in the nation with over 13,000 responses.

➤ MoBroadbandNow produced a series of state and regional maps providing information on broadband accessibility, population density and maximum download speeds. Over one hundred (100) separate Internet service providers (ISP) in the state submitted information used in developing comprehensive maps.

➤ Eighteen regional technology planning teams were established with representatives from fifteen (15) industry and community sectors to discuss short and long-term broadband strategy.

➤ MoBroadbandNow launched a redesigned website which includes an interactive mapping feature for finding broadband availability across Missouri, tools for users to test their Internet connection speed and resources informing Missourians on the importance of high-speed Internet. MoBroadbandNow.com has received over 30,000 visits since launching in May 2011 and 80% of visitors are from Missouri.

➤ The second Broadband Annual Summit, "Breaking New Ground in Missouri" was held in November 2011 with over 350 participants. Keynote speakers at the summit included Blair Levin of the Aspen Institute; Craig Settles, an independent broadband strategist and author; and Keith Bryars of the Federal Bureau of Investigation's (FBI) Technology division.

UNIFIED COMMUNICATIONS

Unified Communications (UC) delivers phone, messaging, voicemail, presence, telepresence and other collaborative services.

FEATURES

Call Manager

Unified Contact Center Express

MeetingPlace

Presence

Voice Gateways

2011 ACCOMPLISHMENTS

Telecommunications

Telepresence

PROJECTS

Unified Communications, Phase II

Tail End Hop Off

AT A GLANCE

8,000
PHONES CONVERTED TO UNIFIED COMMUNICATIONS

$14,000
COST AVOIDANCE IN JUL 2011
***VARIES MONTH TO MONTH**

UNIFIED COMMUNICATIONS

In cooperation with a contractor, ITSD is implementing UC for the State of Missouri. Phase I of the implementation is complete and Phase II is well underway with nearly 10,000 state employees included in the program

FEATURES

Call Manager
Call Manager in Unified Communications allows state staff to add phones on the state network, assign numbers, configure features and add/remove calling groups. The Call Manager allows staff to manage phones throughout the state with more than 10,000 devices registered and roughly 5,000 more phones to be added in phase II.

Unified Contact Center Express
Unified Contact Center Express (UCCX) is the system that runs the state's 85 call centers. There are an estimated 540 agents throughout these call centers. The UCCX reporting allows supervisors to track incoming calls including the number answered, deflected and wait times of the callers as well as agent performance statistics.

Unity Voicemail
The Unity Voicemail service brings the functionality of standard Centrex/Plexar voicemail to the desktop. It allows voicemails to be played directly from the desktop, e-mail notifications to be sent when voicemails are left and gives the user the ability to quickly jump between messages vs. paging through the voicemails one by one. There are currently 8,059 mailboxes on UC, accounting for 8.5 GB of voice data. Unity also manages call handlers, scripts that manage greetings, prompts and options for routing calls.

MeetingPlace
MeetingPlace and WebEx environments give users the ability to schedule conference calls directly from Outlook and virtually share desktops or applications for a meeting. MeetingPlace allows for collaboration either on the network or outside of the network and gives the organizer the ability to hand the meeting over to another attendee in the meeting who can share their desktop. In November 2011, MeetingPlace used 9,136 voice minutes, 3,831 web minutes and 773 video minutes.

Presence
Presence is a function of UC that enables the status of coworkers, instant messaging and group chat. The presence service is linked to Outlook and facilitates faster decision making and enhanced productivity. Presence will extend its reach to Blackberry devices in 2012, enabling the same function on the go.

Voice Gateways

The state currently manages 81 Voice Gateways. Each voice gateway manages call routing for incoming calls from the telephone company and calls traveling across the network. Calls can be carried back and forth across the network between four regional cities (Jefferson City, Kansas City, St. Louis and Springfield) and dropped off as local calls. In the first week of implementation, 44,293 calls were routed from long distance to local, amounting to a cost savings of approximately $2,700.

ACCOMPLISHMENTS

Telecommunications

In June 2011, ITSD completed Phase I of implementing the new phone system, converting over 8,000 phones to Unified Communications. In phase I, a total of 8,189 phones were converted from Centrex to Unified Communications (UC). In addition, a total of 540 Centrex lines were disconnected. Using the July 1 rate of $25.96/Centrex line, the disconnected lines save an estimated $14,018.40/month.

Telepresence

In November 2010, the state implemented Telepresence. Telepresence gives staff the ability to work with constituents virtually in three major cities: Jefferson City, Kansas City and St. Louis. In the first nine months of use, the state held 83 meetings.

PROJECTS

Unified Communications, Phase II

Phase II of UC kicked off in June 2011. Phase II consists of converting over 7,000 phone lines in St. Louis, Springfield and Kansas City to UC. Branching out to our major cities allows UC to UC calls to be made at no cost and will offset long-distance charges.

Tail End Hop Off

Included in Phase II, the state will implement Tail End Hop Off (TEHO) in: Jefferson City, St. Louis, Kansas City and Springfield. This will allow for calls between UC phones in these cities without incurring long-distance changes.

END USER SUPPORT

End user support is provided so that state employees can resume the normal course of their duties in the event of computer malfunctions, lost passwords, and other abnormalities. End user support is also provided when technical assistance is needed during special events like presentations and conferences.

FUNCTIONS

Level I Helpdesk

Level II Helpdesk

Desktop Management

PROJECTS

Microsoft Enterprise Upgrades

Printer Conservation

AT A GLANCE

MORE THAN 320,000
SUPPORT TICKETS CLOSED

$96,000
POWER MANAGEMENT SAVINGS IN 2011

END USER SUPPORT

ITSD's End User support group (ITSD-EUS) provides a wide range of IT assistance to employees of consolidated agencies within state government and some public entities that are affiliated with these agencies. Requests for IT support are entered by state employees into an online "helpdesk" ticket system, where they are resolved by Level I and Level II technicians. The desktop management group is responsible for managing the routine needs of over 41,000 workstations.

FUNCTIONS

Level I Helpdesk

The Level I helpdesk support provides prompt response and issue troubleshooting often in cooperation with the end user via phone. Level I support staff are able to employ remote access support tools to increase productivity and also provide training to the customer. Level I technicians are trained to escalate issues that cannot be resolved quickly to the Level II support team.

Level II Support

In all instances, Level II staff will attempt to resolve issues remotely, maximizing work productivity. However, IT staff must often be physically present with the customer to provide effective service. Thus, Level II field staff are located throughout Missouri, to better serve state employees. Consolidation has allowed some of these field staff to support multiple agencies, creating efficiencies and cost savings from decreased travel.

Desktop Management

The desktop management group pushes out Windows updates, Virus definition files and software to computers throughout the state. Recently, this process been optimized through automation to increase efficiency and save staff time. The group has also improved the process for imaging computers, reducing the time it takes to deploy a new machine.

ACCOMPLISHMENTS

➤ ITSD successfully implemented the online helpdesk system to all consolidated agencies that automatically routes 'help tickets' to appropriate support staff based on agency and category selections by end users. It is an in-house solution developed on the Microsoft .NET platform.

➤ ITSD purchased and deployed approximately 1,500 desktops and 1,400 laptops for the 14 consolidated agencies as part of the five year replacement cycle in 2011.

➤ ITSD completed over 320,944 end user support tickets in 2011.

➤ Power Management was fully implemented on nearly 31,000 machines resulting in an estimated savings of $96,000 annually.

➤ Deploying consolidated staff across the state to assist multiple agencies resulted in an estimated savings of $120,000 in travel costs.

➤ Self-Serve Password was installed on all supported machines for all agencies, allowing end users to reset passwords without making a request for help, saving time for technicians to focus on other areas of support.

➤ Reducing the number of desktop images from over 200 to 28 - with two per consolidated agency, saved time by reducing complexity.

PROJECTS

Microsoft Enterprise Upgrades
ITSD has initiated migration to Windows 7 and Office 2010. This allows the state to leverage current technology and helps ITSD provide better customer support through standardization.

Printer Consolidation
ITSD has begun assessing and implementing printers to support state agencies. This project will reduce printer costs and consumables. It will also help ITSD provide better customer support through standardization.

GEOGRAPHIC INFORMATION SYSTEMS

FUNCTIONS

Software Support

Enterprise GIS

Mapping Applications

Geospatial Technology
Program Integration

2011 ACCOMPLISHMENTS

Disaster Assistance

Hazard Mitigation
Mapping Website

WIC Online Locating System

PROJECTS

Electronic Permitting

Enterprise-wide Geo-coding

AT A GLANCE

DISASTER ASSISTANCE

24/7 ON DEMAND SUPPORT

SPATIAL ANALYSIS & MAPPING SUPPORT
FOR MULTIPLE DISASTERS, INCLUDING A HISTORIC BLIZZARD, POWERFUL TORNADOES IN JOPLIN, ST. LOUIS AND SEDALIA AND HEAVY FLOODING ALONG THE MISSOURI AND MISSISSIPPI RIVERS.

GEOGRAPHIC INFORMATION SYSTEMS

The Office of Geospatial Information (OGI) was formed in January 2011. OGI consolidated staff from four different agencies to improve support to all state GIS, sharing resources and knowledge. OGI coordinates and supports Geographic Information Technology (GIT) for the State of Missouri, covering all technologies and standards relating to the development of the state's geospatial infrastructure, data and metadata.

This includes technologies such as Geographic Information Systems, Global Positioning Systems and Remote Sensing.

FUNCTIONS

Software Support
OGI staff provide support to GIS software users.

Enterprise GIS Support
OGI staff administer Enterprise GIS, maintaining several ArcGIS servers and geo-databases. Staff coordinate data acquisition with other state, federal and local agencies and geo-enable data through location services. They also perform quality control checks to ensure accuracy.

Mapping Applications
OGI staff are responsible for creating mapping applications like the Missouri Common Operating Picture, or MoCOP, used by emergency managers; Natural Resources Interactive Mapping Service; WIC Stores and Clinic Locator; and the Flu Clinic Locator. In addition, staff create products such as the Disaster Support Atlas, which provides emergency support mapbooks for every county in the state of Missouri in a geo-enabled PDF format.

Geospatial Technology Program Integration
OGI staff work with program managers to integrate geospatial technology into programs for the State of Missouri and create GIS projects that improve program effectiveness, including grant management, asset tracking and catastrophic disaster planning.

ACCOMPLISHMENTS

Disaster Assistance
OGI staff provided support to state agencies assisting victims of natural disasters in Missouri in 2011, including a historic blizzard, powerful tornadoes in Joplin, St. Louis and Sedalia and heavy flooding along the Missouri and Mississippi Rivers.

Hazard Mitigation Mapping Website

This secure site gives Hazard Mitigation Specialists an online mapping environment. The site includes projects for safe rooms, flood buyouts and low water crossing, with the ability to add and modify projects as needed. It also includes customized tools for flood management and the ability to create reports.

Women, Infants, and Children (WIC) online locating system

The website allows the public to locate WIC offices and stores that accept WIC checks throughout the state.

PROJECTS

Data Sharing Portal

OGI is coordinating efforts with other ITSD staff to create a data sharing portal.

Electronic Permitting

OGI staff worked to provide direction related to GIS services for use within the Department of Natural Resources (DNR).

Enterprise-wide Geo-coding Service

A project is underway to provide enterprise-wide geo-coding services. In the past, these services have been provided differently across the state departments. A single enterprise solution will provide the most consistent and efficient method for geo-coding department data.

INFORMATION MANAGEMENT & SECURITY

The Chief Information Security Officer (CISO) leads the Information Security Management Office (ISMO), which works to ensure information and information systems maintained by the state are protected and appropriate safeguards are in place to reduce potential risks. Successful information security management allows networks to operate at maximum capacity.

FUNCTIONS

Forensics

Vulnerability Assessments

Intrusion Prevention

Internet Filtering

Security Architecture

Outreach

2011 ACCOMPLISHMENTS

Switched Internet Filtering Systems

Finalist in "The Best of the Web"

Revitalized Information Security Standards

PROJECTS

Mobile Device Security

Event and Awareness Management

Authentication Management

AT A GLANCE

CYBER SECURITY

81.9mil

ATTACKS PREVENTED

Blocked from December 2010 thru November 2011

NATIONAL FINALIST

BEST OF THE WEB NOMINATION FOR CYBER-SECURITY

INFORMATION MANAGEMENT & SECURITY

The Information Security Management Office (ISMO) is responsible for safeguarding the state's information systems. ISMO promotes and provides expertise in information security management for all state agencies and supports national and local homeland information security efforts.

FUNCTIONS

Forensics
ISMO is one of the few entities in the state (public or private) with a computer forensics lab capable of recovering information from damaged or formatted storage devices and assisting with investigations involving computer hardware.

Vulnerability Assessments
ISMO performs routine and ad-hoc vulnerability assessments against all networked assets, everything from mainframes to printers. ISMO works closely with application developers to test soon to be released applications to ensure that the state's information is protected.

➤ Assess over 30,000 networked assets on a routine basis, internal and external.
➤ Ultimately leads to the protection of state information as the result of ensuring assets don't have critical vulnerabilities.

Intrusion Prevention
ISMO oversees the management of the state's intrusion prevention system. The intrusion prevention system stops known malicious attacks on the state's network. From December 2010 through November 2011, the state blocked 81.9 million attacks on the state network.

Internet Filtering
ISMO manages the state's Internet filter. The Internet filter not only protects the state's systems and users from malicious websites, but also assists in reducing bandwidth consumption and increasing productivity.

During an average month:
➤ The Internet filtering system monitors over 500 million requests.
➤ Close to 10% of all Internet requests are blocked, saving the state gigabytes in bandwidth.
➤ About 1,000,000 of the Internet requests blocked are security related.

Security Architecture
ISMO provides guidance in developing and maintaining the state's information security architecture and standards.

Outreach

ISMO communicates with state users and the general public using Twitter, Facebook and through its own website, cybersecurity.mo.gov.

ACCOMPLISHMENTS

Switched Internet Filtering Systems

The new Internet filtering system provides better enterprise-wide management of Internet requests. The state will save over $100,000 over the next three years as a result of the system switch.

Finalist in "The Best of the Web" Contest

Missouri was named a finalist among the nation's states and local governments that use their websites to promote cyber security. ISMO is responsible for maintaining the content on cybersecurity.mo.gov.

Revitalized Information Security Standards

The enterprise architecture is a vital component of state government that helps state agencies understand the approved standards and technologies. In 2011, ISMO revitalized its core standards.

PROJECTS

Mobile Device Security

As the enterprise becomes more mobile and agile, security will play a major role in ensuring the state's data will remain safe by protecting data and information on mobile devices.

Event and Awareness Management

To further enhance awareness and increase security, ISMO plans to deploy a more sophisticated event and awareness management system. This system provides alerts and reports about the current status of core systems.

Authentication Management

ISMO plans on deploying more sophisticated authentication mechanisms.

NETWORKS & TELECOMMUNICATIONS

FUNCTIONS

State Network

Internet Access

Voice and Video Services

2011 ACCOMPLISHMENTS

Application Performance
Monitoring

Shared Services Network

PROJECTS

Network Redesign / Expansion

Interactive Video Consolidation

Cellular Wireless LAN Expansion

AT A GLANCE

50 THOUSAND ACTIVE USERS
ON SECURE INTERNET ACCESS ACROSS STATE AGENCIES
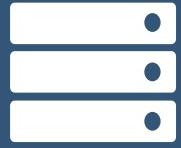
99.99%
NETWORK UPTIME

10,000
CELLULAR CONNECTIONS FOR ALL STATE AGENCIES

NETWORKS & TELECOMMUNICATIONS

The Networks and Telecommunications team is responsible for the communication infrastructure that provides essential support to the functions performed by state government. Advancements by the team have enhanced business operations, making communications within state government and with Missouri residents more efficient.

FUNCTIONS

State Network
The state network core serves as the foundation for connectivity from the State Data Center to the end user. The structure is comprised of carrier-grade technologies emphasizing the highest levels of capacity and reliability, including connectivity to the state's disaster recovery site. Last year the core network experienced an uptime of approximately 99.995%. A combination of private network and Internet technologies establish the connecting structure from the core network to nearly 1,100 consolidated agency and business partner locations across the state, ranging from offices to state parks to radio towers. The network structure also provides wireless Local Area Network (LAN) connectivity to hundreds of mobile devices on a daily basis.

Internet Access
Internet access is an essential service for conducting daily operations. The team provides secure Internet access to approximately 50,000 users across all state agencies, as well as access to hundreds of state websites via the public Internet. During the snowstorm in late January 2011, it was estimated that approximately 8,000 staff were able to work from home by utilizing Internet-based remote access services.

Voice and Video Services
Cellular services, interactive video and web collaboration are valuable communications tools. The voice and video services team supports over 10,000 cellular connections for all state agencies and provides support for hundreds of video conferencing endpoints. In addition to these services, the team also provides desktop telephony support for thousands of analog service users across all agencies.

ACCOMPLISHMENTS

Network Consolidation
Through consolidation, multiple agency computer room networks were migrated into the state data center, significantly reducing costs for equipment, maintenance and connectivity, while standardizing structures for future support and improved disaster recovery.

Application Performance Monitoring

Application Performance Monitoring tools have been deployed to improve application trouble-shooting capabilities.

Shared Services Network

The shared services network at major state office buildings and smaller multi-tenant locations was partially implemented.

PROJECTS

Network Redesign / Expansion

Implement a series of changes to the statewide network structure to improve capacity, availability, disaster recovery and continued deployment of the shared services network model.

Interactive Video Consolidation

Consolidate interactive video resources into a common management and scheduling structure.

Cellular and Wireless LAN Expansion

Expand cellular and wireless LAN resources to support the growing challenges of mobile computing.

PROJECT MANAGEMENT OVERSIGHT

The Project Management Oversight Office provides transparency and prioritization of consolidated ITSD operations to assist in the ongoing evaluation of fiscal responsibility and deployment of state IT projects.

FUNCTIONS

ProjectManager.com

ITSD Portfolio & Project Repository

PMO Tools & Templates Repository

2011 ACCOMPLISHMENTS

Application & Project Portfolio

PMO Tools & Templates Repository

PROJECTS

Portfolio Management Assessment

Project Prioritization & Governance

AT A GLANCE

360°VIEW

OF ITSD PROJECTS AND SOFTWARE APPLICATIONS

INFORMATION COLLECTED

1,120 APPS
165 PROJECTS

PROJECT MANAGEMENT OVERSIGHT

The Project Management Oversight Office (PMO Office) was established as the central clearing house for IT project management, providing greater visibility and transparency of IT operations. The office aligns state department needs with IT resources and priorities. With oversight of project managers in evaluation, estimating and deployment of systems to support the functions of state departments where necessary.

FUNCTIONS

Project Manager
The PMO Office compiles project status reports into an web-based ITSD Projects Dashboard through a system called ProjectManager.com. This allows ITSD management to view ITSD Projects and their current status.

Consolidated ITSD Portfolio and Project Repository
The consolidated ITSD Portfolio and Project Repository is available via an internal website and is a central location housing information regarding systems, applications and projects currently supported by ITSD. The consolidated ITSD Portfolio and Project Repository gives ITSD management a 360-degree view of ITSD projects and software applications.

2011 Portfolio and Project Repository statistics:
➤ Collected vital information on 1120 software applications
➤ Collected information on 165 application development projects

PMO Tools and Templates Repository
The PMO Tools and Templates Repository is a collection of standardized documents and procedures used for project management. These processes and templates support ways to improve business operations (i.e., reduce delivery costs and time):
➤ Early identification of project issues, budget, scope and risks
➤ Apply knowledge that is working for one agency and may help another
➤ Eliminate duplication of data and processes among project managers

This site also is the source of "best practices" that, together with PMO staff, serves as a knowledge-based center, providing expertise, support and training.

2011 PMO Tools and Templates Repository statistics:
➤ Over 20 standard forms and templates have been provided to ITSD staff to use for project management activities
➤ Training was provided in early November to more than 100 consolidated ITSD project managers, client services managers and ITSD fiscal staff on the new collaboration site, processes and templates

ACCOMPLISHMENTS

Consolidated Application and Project Portfolio

The PMO Office gained momentum in 2011 with the enhancement of a consolidated portfolio and project repository. The repository is available via the web and being used on a daily basis to improve communications, enhance team collaboration, increase efficiencies and provide greater visibility into operations. In due course, the portfolio and project repository will help obtain objective measurements of resource needs, overall project performance and so forth.

PMO Tools and Templates Repository

The PMO established a consolidated tools and templates repository for all consolidated agencies to use for project management activities. In addition, a collaboration website was established to facilitate project paperwork processing, ensuring that all projects are tracked and oversight is provided as needed to keep projects on time and budget.

PROJECTS

Portfolio Management Assessment

A consultant was hired in 2011 to complete a Portfolio Management Assessment pilot project at the DNR. PMO staff worked with consultants to learn the processes and refine requirements for complete Portfolio Management Assessments at all of the consolidated agencies. In 2012, a Portfolio Management Assessment will be completed on the remaining consolidated agencies in order to identify possible efficiencies and cost savings.

Project Prioritization and Governance Process

A formal Project Prioritization and Governance Process was created in 2012. This process will ensure that the allocation of resources to IT projects is based on department goals and priorities.

STATE DATA CENTER

The Missouri State Data Center (SDC) provides a cost effective, uninterruptable hosting environment to support state IT needs. The IT services provided by the SDC support, either directly or indirectly, every service provided by the State of Missouri.

FUNCTIONS

Print Shop

Operations and Monitoring

Websphere, Middleware and Application Server Support

Systems

2011 ACCOMPLISHMENTS

Virtual Desktop Infrastructure

Secondary Site Services

Account Provisioning Consolidation

Archibus System

Backup/Recovery Standardization

PROJECTS

Network Operations Center

Configuration Management Database

Executive Dashboard/ Consolidated Systems Monitoring

DHSS Datacenter Migration

AT A GLANCE

PHYSICAL CONSOLIDATION

500 SERVERS REMOVED

5 TONS EQUIPMENT & MATERIAL REMOVED

VIRTUALIZATION ROLLOUT

+500 VIRTUAL DESKTOPS DEPLOYED
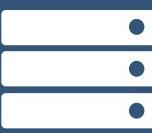
1,200 ACTIVE VIRTUAL SERVERS

STATE DATA CENTER

The Missouri State Data Center (SDC) is the primary facility housing ITSD supported computer systems, storage area networks (SAN) and associated network and telecommunications equipment. The primary focus of the SDC is to provide a cost effective, un-interruptable hosting environment to support state IT needs. The IT services provided by the SDC support either directly or indirectly, every service provided by the State of Missouri.

FUNCTIONS

SDC Print Shop

The SDC print room operates 24-hours/day, 365 days/year and provides a critical service to the state through the production of printable checks, titles and more.

➤ 1.8 million titles printed in 2011

➤ 2.1 million checks printed in 2011

➤ 932,000 direct deposit tax returns printed in 2011

SDC Operations and Monitoring (Systems, Power, Cooling, Security)

SDC operations staff maintains batch processing, critical system monitoring and alerting of all state IT systems, to include cooling and physical access of SDC, as well as provides after-hour phone support to state agencies. In 2011, SDC operations staff opened an average of 1,100 monthly after-hours support calls, assisting agency users with IT issues.

SDC Websphere, Middleware and Application Server Support Team (WMASS)

This team was formed in 2011 to manage and support the consolidation of the state's web hosting, active directory, web portal, SharePoint, Enterprise Content Management (imaging), Exchange, account management and other middleware application components. Consolidation of licensing, maintenance, hardware and software is resulting in cost savings across these technologies. Efficiencies are realized from standardization of processes and procedures within these technologies.

➤ Support 1,000+ applications for 14 consolidated agencies.

➤ Support enterprise directory services and e-mail communication systems which consist of approximately 42,000 accounts.

➤ Support enterprise SQL Server Reporting Services for eight consolidated agencies.

➤ Support the enterprise e-mail archiving system for 14 consolidated agencies.

➤ Support the enterprise SharePoint environment for the State of Missouri.

SDC Systems

The SDC systems group is responsible for installing, configuring and maintaining all distributed, midrange, mainframe and storage systems in the SDC. This group maintains all data backup and replication of data and recovery of systems to disaster recovery site.

- ➤ 1 Z10 Enterprise class IBM Mainframe – 6,000 MIPS
- ➤ 1 Z10 Business class IBM mainframe – 3,000 MIPS (DR location)
- ➤ 100 blade servers
- ➤ 1,200 virtual servers
- ➤ 40 physical servers
- ➤ 4 - AS400 iSeries
- ➤ 1 petabyte of SAN
- ➤ Data backup for 1,240 state servers, totaling 938,225 GB of data.

ACCOMPLISHMENTS

SDC Consolidation

The SDC continued efforts to centralize and consolidate IT computer rooms, along with the conversion of physical servers to virtual servers. The SDC has reduced its necessary floor space from 30,000 square feet to 10,000 square feet. These changes have produced the following efficiencies:

- ➤60% reduction in cabling
- ➤Elimination of over 500 physical servers
- ➤Removal of over 5 tons of equipment/materials
- ➤Reduction in power requirements in the SDC by 1/3.

Virtual Desktop Infrastructure

SDC continued their work towards implementing a virtual desktop infrastructure (VDI). A team was assembled, assessment processes created, construction methods established and deployment strategies tested and implemented. In 2011, the team built and deployed over 500 virtual desktops. This virtualized over 250 applications, allowing for more efficient and dynamic operation of the desktop applications to VDI users.

LAMP Environment

In 2011, ITSD/SDC architected, configured and deployed a web application environment based on LAMP (Linux, Apache, MySQL and PHP) principles. This allowed the State to assume responsibility of services previously provided by MORENet. By migrating these services into the SDC cloud, it allowed the State a more flexible and timely response managing State web services.

Secondary Site Services

SDC continues to enhance the availability and agility of ITSD services. ITSD architected, constructed and implemented a full electronic replication of mainframe services between our primary and secondary sites. Testing demonstrated the recoverability of mainframe services to hours versus weeks. The annual cost of Mainframe Disaster Recovery services was reduced by over $250,000/year.

Account Provisioning Consolidation

The SDC has initiated the consolidation of account provisioning. This is the process by which accounts are created, updated, changed and removed. These accounts are used by each customer to gain access to the State of Missouri's electronic systems. Standardization of this process will ensure maximum security measures are implemented and auditing requirements are met. This change will result in a reduction in time spend on staff support. Previously, 130 full time staff spent 20% of their time performing these duties. This has been reduced to 15 staff performing this service, resulting in the reallocation of 115 staff, who now dedicate their time to other key functions.

Archibus System Migration

The SDC migrated the Archibus system used by OA FMDC. This is a Work Order and Heating/Cooling management system. The system, which was hosted offsite, was migrated to the SDC in November 2011. This system is now supported by the SDC and provides an annual cost savings of $306,912.

Backup\Recovery Standardization

SDC has taken steps to transition from tape backup to disk. Moving to disk provides a quicker and more efficient way to replicate and recover the state's critical data in the event of a disaster.

PROJECTS

Network Operations Center (NOC)

As a part of our ongoing efforts to improve IT services and provide a more efficient and speedy response to events that impact IT services, ITSD is assembling a Network Operations Center.

- ➤ NOC will be a 24x7 monitoring, assessment, alerting and problem/resolution tracking team.
- ➤ NOC will be the communications hub between various groups within ITSD.
- ➤ NOC will serve to better communicate to update customers and the executive team.
- ➤ Acting as a central point of communication to help eliminate "chatter" at the technician level allowing the technicians to be dispatched appropriately and focus on technical resolution.

DHSS Datacenter Migration

SDC will migrate the Department of Health and Senior Services datacenter to the SDC. This will include moving approximately 140 servers. Servers will be moved from current physical servers to virtual servers, resulting in centralized support and maintenance. It is anticipated that this change will result in a reduction in power consumption and a reduction in server maintenance and

replacement costs. The new system will provide DHSS off-site disaster recovery capabilities.

Configuration Management Database (CMDB)

ITSD has functionally aligned staff/resources. This effort will identify duplication of efforts across IT groups regarding the documentation of agency applications/systems. ITSD is developing a shared CMDB that will serve as a central repository for application configuration. Goals of this project include:

➤ Build a more dynamic recovery procedure for agencies systems and applications.

➤ Be an essential tool used by the NOC to assess and determine impact associated with various disruptions in the SDC.

Executive Dashboard/Consolidated Systems Monitoring

The Executive Dashboard will improve application availability to SDC customers and improve system monitoring. SDC supports nearly all key IT services supporting critical services provided to State of Missouri agencies.

➤ This system will improve the health of these systems at any given moment and be available to the executive level.

➤ Executive dashboard will allow key decision makers access to the health of their IT systems.

WEB & APPLICATION DEVELOPMENT:
OFFICE *OF* ADMINISTRATION

The Office of Administration provides guidance and assistance to state government entities through the implementation of executive office initiatives, the establishment of uniform procedures and rules as well as providing services in a cost-effective manner.

CRITICAL SYSTEMS

Statewide Accounting

Personnel & Employment

Procurement & Bidding

Web Portals & Development

2011 ACCOMPLISHMENTS

Employee Self-Service Portal

Office of Equal Opportunity Website

PROJECTS

Missouri Business Portal

Missouri Citizen Portal

Missouri Data Portal

Missouri State Employee Portal

Office of Administration Website

ESS Enhancements

RESTORE

AT A GLANCE

2011 MOBILE TRAFFIC VS 2010

400%
INCREASE IN MOBILE VISITORS

ONLINE COMMUNICATION

MORE THAN 11 MILLION
PAGE VIEWS ON MO.GOV

WEB TECHNOLOGY

HTML5 JAVASCRIPT .NET WORDPRESS DRUPAL USABILITY MOBILITY PHP CSS3

WEB & APPLICATION DEVELOPMENT:
OFFICE *OF* ADMINISTRATION

ITSD-OA programmers who have skills working in COBOL/mainframe and Microsoft .NET platforms maintain and develop the systems that allow the Office of Administration to perform its core functions. The ITSD-OA web team provides technical support and expertise to all agencies and maintains web portals that support the state as a whole.

CRITICAL SYSTEMS

Statewide Accounting
The Statewide Advantage for Missouri (SAM II) software is an accounting system that processes state transactions for purchases, payments and fixed assets reporting. It is also used to perform project/federal grant reporting and drawdowns. Human Resources uses SAM II to process state payroll and perform other HR-related tasks.

SAM II is now approaching its 15th year in production. It is a COBOL/Mainframe based system that has been customized for the State of Missouri and requires ITSD staff to ensure that the system is updated to comply with state and federal accounting rules and is functioning as intended.

SAM II data warehouses exist and are updated so that other systems are able to query the large amounts of data in SAM II.

In 2011, SAM II processed more than 87,000 purchase orders; more than 1.1 million payment vouchers; printed close to 600,000 payments to vendors by check; created close to 500,000 direct deposit payments to vendors; processed more than 1.4 million payroll checks; and processed over 55,000 paychecks per pay period. Advices are now printed for 23 percent of direct deposits, down from 29 percent a year ago, reducing printing costs.

Personnel and Employment
The Electronic Application System (EASe), Management and Applicant Information Resource System (MAIRS) and Job Opportunity Announcement (JOA) software combine to support the Missouri Merit system. The JOA system displays a listing of job opportunities. Merit System job applicants use EASe when applying for a spot on a Merit Register. EASe collects pertinent employment information about an applicant and depending on the job class applied for, determines the applicant's rating of their education and experience based on their responses to a series of questions. MAIRS, together with EASe, is used to process Merit System applications, schedule and score tests, fill registers, create certificates and track dismissals.

EASe and MAIRS are based on the legacy technology CA Gen that makes updating the systems difficult. They are candidates for replacement by a modern system when resources become available.

Bidding

The Online Bid (OLB) system is a statewide bid system used by agencies to solicit and receive bids and make awards.

Through the Online Bid (OLB) system in 2011, more than 11,000 total vendors registered to use the site; close to 3,000 new or updated registrations were received over the past year; more than 1,000 vendors registered for premium usage, paying for additional functionality and e-mail notifications; 457 bids were posted and close to 2,000 bid responses were received.

Web Portals

ITSD supports statewide web development by maintaining a centralized team of web professionals to consult on web development. This team provides templates and consults with other teams and government agencies on design, HTML5, CSS, jQuery, user experience, mobility, PHP, Codeigniter, Wordpress and Drupal.

State web portals include:

➤ MO.gov, the state's citizen portal provides a single citizen-centric view of the state's web presences
➤ The State Business Portal, business.mo.gov, which provides resources and information for starting and operating a business in Missouri
➤ The Missouri Accountability Portal, mapyourtaxes.mo.gov allows citizens to track how the state is spending taxpayers' money and tax credit information
➤ The Missouri Data Portal, mo.gov/data, which catalogues data sets maintained by state agencies.
➤ The Missouri Stimulus Portal, transform.mo.gov. These enterprise portals make information and data from all state agencies more accessible

The State of Missouri is committed to deploying new websites using content management systems that allow business experts and communications teams to be active participants in updating and creating website content. One example of this is MO.gov, which operates using Wordpress, a free, open-source content management platform. In 2011, MO.gov received over 4 million visits and totaled over 11.5 million page views.

Other Systems

There are several other systems in use that are developed and maintained by OA-ITSD programming staff and support the critical tasks of a number of OA divisions, boards and commissions. These include, but are not limited to:
BRASS - State budgeting system
PERforM - State employee appraisals
RISK - Workers' Compensation for state employees
Fleet and CARS - Tracks state vehicle fleet information and reservations
STC - State Tax Commission property assessments

ACCOMPLISHMENTS

Missouri Employee Self-Service Portal (ESS)

ESS allows state employees to view and interact with their employment and benefit information. Information currently available on this portal includes pay stubs, leave balance information, state-wide and agency-specific employee announcements, up to five years of W2 information, access to blank W4 forms and a single login for access to benefit providers.

Office of Equal Opportunity Website

The new OEO website at oeo.mo.gov includes a directory of certified minority- or women-owned business vendors, information on how to become a certified M/WBE and details about upcoming OEO events. The improved website allows OEO to directly manage content and communicate more effectively with constituents about opportunities through social media.

PROJECTS

Missouri Business Portal

The Missouri Business Portal will be redeveloped with improved content, usability and unification with agency websites.

Missouri Data Portal

The Missouri Data Portal's platform is in line to undergo improvements in 2012 that will allow interested citizens, researchers and developers to more easily access metadata and State of Missouri datasets. This will make it easier to read, interpret and manipulate data.

Missouri Citizen Portal (MO.gov)

Enhancements to MO.gov will include:

➤ Additional added-value content;

➤ Unified search allowing users to search mo.gov's content, online services, state agencies and state employees;

➤ A centralized location of news releases from across state agencies;

➤ An alternative user experience for mobile device users;

➤ And a better inclusion of local and federal government services.

State Employee Portal

A new State Employee Portal will be developed in 2012 that will allow employees to access important resources through one central location. The site will connect employees to the IT help desk, state vendors, merit system information, employee benefits overviews, state webmail, OA carpool information, payroll information, PERforM and much more.

Office of Administration Website

The OA website will be redeveloped and updated with improved content. The new site will be better integrated with job seeker, vendor and state employee portals. It will employ a content management system that will allow OA staff to update the site without ITSD intervention.

Risk Enterprise System to Restore Employees (RESTORE)

The Risk Enterprise System to RESTORE Employees (RESTORE), which manages workers compensation claims for employees of several state agencies and universities, will be implemented in 2012. Created using the .Net platform, RESTORE will replace the Risk Management System that has been in use since 1993 and is based on block mode, green-screen technology that is now outdated. RESTORE will provide new and improved functionality in the areas of payments, claim subrogation and claim event documentation; streamline federally required Medicare reporting; eliminate paper-based processing for claim forms and settlement negotiations; and enhance the ability to track trends and manage costs efficiently and effectively.

Employees Self-Service (ESS) Enhancements

Development is underway for ESS enhancements that will be implemented in 2012. This will include the ability to view reimbursement payments, submit name and address changes and list training courses attended.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* AGRICULTURE

The Missouri Department of Agriculture's (MDA) mission is to serve, promote and protect the agricultural producers, processors and consumers of Missouri's food, fuel and fiber products.

CRITICAL SYSTEMS

- Local Food Promotion
- Animal Health Management
- Animal Care
- Veterinarian Accreditation
- Petroleum Station Inspection
- Fuel Quality
- Weights and Measures
- Pesticides
- Feed and Seed

2011 ACCOMPLISHMENTS

- Application Modernization
- AgriMissouri System Enhancements

PROJECTS

- Animal Care System
- Petroleum Program's Fuel Quality Laboratory Information

AT A GLANCE

198 FARMERS MARKETS
REGISTERED WITH AGRIMISSOURI SYSTEM

10,000
GARDENS REGISTERED IN 10,000 GARDENS DATABASE

MORE THAN 9,500
ANIMAL BRANDS REGISTERED IN USA HERDS SYSTEM

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* AGRICULTURE

ITSD-MDA develops new internal applications for MDA in the Microsoft .NET environment using Micro-soft SQL databases. There is also some development on the Microsoft Sharepoint and Microsoft Access platforms. A number of AS400 legacy systems are being converted to Microsoft .NET.
Web development for MDA occurs in the open source environment using PHP scripting and MySQL databases. MDA is using the Wordpress content management system on a number of projects.

CRITICAL SYSTEMS

Local Food Promotion
The AgriMissouri system allows MDA to manage memberships of local food producers into the Ag-riMissouri program. The system supports management of membership profiles that are exported to the AgriMissouri website where consumers can learn about local food producers. There are currently more than 1,300 members and 198 farmers' markets registered.

Animal Health Management
USA herds is a browser-based, off the shelf, vendor supported application that allows MDA to track livestock and poultry in Missouri to help ensure that our food supply is safe. Components include premises reports, animal brands and livestock import/export. There are more than 14,000 premise reports and 9,500 animal brands in the system.

Animal Care
The Animal Care System is used by MDA to support their efforts to ensuring that dogs and cats, specifically those under the care of breeders, pet sitters, intermediate handlers, dealers, exhibitors, hobbyists, boarders, retail pet stores, animal shelters, rescue operations and municipal pounds, receive adequate care, shelter, health care and proper socialization. The Animal Care System is used by field staff located throughout the state to capture information on routine inspections, complaints and inquiries. The system is used in the office for data processing to issue licenses and maintain data to ensure and enforce mandated regulations. In 2011, more than 23,000 facilities were licensed and or registered by the department.

Veterinarian Accreditation
The Veterinarian Accreditation System is used to manage the registration of licensed veterinarians in Missouri. Currently, there are more than 3,300 veterinarians registered with the department.

Petroleum Station Inspection System
This system maintains data on safety and device inspections of above ground storage tanks, service stations, refined fuels bulk storage facilities, marinas, airports, barge and pipeline termi-nals, bulk delivery trucks and other retail/wholesale locations. Currently, the department regulates nearly 4,000 facilities of various types.

Fuel Quality

The Fuel Quality (Dbase) Program administers the fuel quality law through inspection, analysis and enforcement to help ensure consumers are purchasing quality motor fuels. Fuel samples are collected by field personnel and submitted for testing. The petroleum laboratory analyzes gasoline, kerosene, heating fuels, diesel fuels and alternative fuels including biodiesel and E85 fuel ethanol to make certain they meet state quality and safety standards. In 2011, there were more than 9,000 samples obtained and tested through fuel quality inspections.

Weights and Measures

WinWam is a third-party application that allows inspectors to capture field inspections electronically. In 2011, data from more than 1,400 inspections was entered into this system.

Pesticides

The Pesticide Program is an AS400 system that aids in the prevention of adverse effects of pesticides on human health and the environment. The program also aids in assuring the availability of necessary pesticides by licensing pesticide applicators and dealers, registering pesticides and performing inspections and investigations in the enforcement of the Missouri Pesticide Use Act and the Missouri Pesticide Registration Act.

Feed and Seed

The Feed and Seed application uses a combination of .NET technology and the AS400 system that tests to ensure correct labeling on packages. In 2011, a total of more than 25,000 tests were performed.

ACCOMPLISHMENTS

Modernization

The Vet Accreditation and Petroleum Service Station Inspection applications were modernized. The AS4000 legacy applications were converted to systems using Microsoft.NET technology.

AgriMissouri System

Enhancements were made to this system in order to process online registration data for producers and businesses that make grow, or raise agricultural products; or operate a farm, retail store, farmers market, or some other agritourism destination.

10,000 Gardens and Garden Contests

The 10,000 Gardens website allowed citizens and organizations to register their garden as one of Missouri's 10,000 gardens. There were also contests which included public voting on gardens.

Missouri Wine

The MissouriWine mobile app (developed by a vendor) allows users to search wineries, save favorite wines and more. The MissouriWine website was redesigned by a contracted vendor.

PROJECTS

AgriMissouri
Enhancements to the AgriMissouri system will include components that allow more self-service for producers, allowing them to maintain more accurate profile information.

Animal Care System
Enhancements will be made to the system to comply with new regulations facing dog breeders.

Petroleum Program's Fuel Quality Laboratory Information
A new LIMS system that will replace existing legacy applications will be implemented.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* CORRECTIONS

The Missouri Department of Corrections (DOC) supervises and provides rehabilitative services to adult offenders in correctional institutions and Missouri communities to enhance public safety.

CRITICAL SYSTEMS

Offender Management Systems

Missouri Corrections Integrated System

Automated Road Book

Law Enforcement Notification System

Offender Web Search

2011 ACCOMPLISHMENTS

Intervention Fee Collection

Department of Corrections Online Training Academy

PROJECTS

MOCIS Module for Healthcare

Public Online Visitation Web Application

Visitation Tracking System

AT A GLANCE

OFFENDER REGISTRY WEB SEARCH

10 MILLION

SEARCH REQUESTS IN 2011

272 MISSOURI AGENCIES

IN THE LAW ENFORCEMENT NOTIFICATION SYSTEM

WEB TRAFFIC IN 2011

11.2

MILLION PAGE VIEWS ON DOC.MO.GOV

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* CORRECTIONS

ITSD-DOC performs application development on behalf of the Department of Corrections (DOC) using Java technology. There are also RPG/AS400 systems in place that will one day be converted to web-based Java applications.

CRITICAL SYSTEMS

Offender Management Systems
DOC utilizes offender management systems including OPII, Missouri Corrections Integrated System (MOCIS) and Automated Road Book (ARB) to manage offenders both in Missouri institutions and in the community. OPII has been in production since 1998 and is a RPG/AS400 based system that is customized to the DOC business processes. OPII contains 549,183 total offender records and 125,707 active offender records.

Missouri Corrections Integrated System
MOCIS is a new web browser application that will ultimately replace the majority of the offender management systems for DOC. The first modules in MOCIS were implemented in March 2010. Additional modules are scheduled for implementation over the next several years. MOCIS currently has 11,412 active users.

Automated Road Book
ARB is a web browser application and has been in place since 2005. This application allows Probation and Parole staff to log case notes for offenders under their supervision. Through ARB, 2,134,282 case notes were recorded in 2011.

Law Enforcement Notification System
The Law Enforcement Notification System (LENS) is a web browser application for law enforcement agencies that allows authorized users to run an inquiry on any offender under the supervision of DOC through a secure internet connection at no cost. Basic identifying information (including photos), current offense, current location (or last known address) and supervision contact information are a few examples of the information available. In addition, agencies may subscribe to receive electronic notification when selected events of interest occur during a specific offender's incarceration, such as upcoming parole hearings, escapes and releases. LENS has 272 agencies enrolled; 3,756 agency users enrolled; and 5,616 subscriptions to events.

Offender Web Search
The Offender Web Search (OWS) application is a public website that allows the public to search for information about offenders under active supervision of DOC. This information includes identifying information, offense information and contact information for the supervising DOC location.

ACCOMPLISHMENTS

Intervention Fee Collection

DOC previously contracted with a third party for the collection of Intervention Fees for all offend-ers under the supervision of the Division of Probation and Parole. Approximately $14 million in Intervention Fees is charged to offenders annually. Previously, the third party received 10% of the total collection effort. DOC has eliminated the third party collection by implementing screens for fees, adjustments and waivers within the Missouri Corrections Integrated System (MOCIS) that interfaces with the DOC Offender Financial Services system. Additionally, DOC added kiosks in each Probation and Parole office, implemented a toll free IVR solution thru the state contract and created a new website where offenders can make payments and inquire their balances. Remov-ing the third party for the collection of Intervention Fees will result in a 10% cost savings of the Intervention Fees collected per year. Implementation of the screens within MOCIS streamlines the process for Probation and Parole staff and implementation of the kiosks, toll free IVR solution and new web site were designed to increase the collection rate for intervention fees and other offender owed debt to the Department of Corrections.

Department of Corrections Online Training Academy

Department of Corrections Online Training Academy (DOCOTA) was designed to create an e-learning environment for courses planned and controlled by the Department of Corrections (DOC) Training Academy. DOCOTA allows for Site, User and Course Management; Lessons; Quizzes; Surveys; Reporting; WIKI; Certificates and Outside Course tracking. DOC has been able to decrease spending on training and increase work productivity by allowing users to take computer-based training at their work location, saving time and money on travel to regional training sites. At this time, there are 2,991 users with DOCOTA accounts.

PROJECTS

MOCIS Module for Healthcare

DOC is statutorily obligated to provide basic health care at the same level as the non-incarcerated community. The Missouri Corrections Integrated System (MOCIS) Healthcare module will be imple-mented in 2012 and is comprised of four areas of care: medical, mental health, substance abuse treatment and sex offender treatment. Medical and mental health service records contain doctor, nurse, technician, specialists, lay-in restrictions and laboratory requests. Basic health care includes sick call and routine access to prescribed medications, adequate screening and examinations, emergency care, allergy assessment, ambulatory care, infirmary, optometry, dental care, hospital care, substance abuse treatment and specialty care. Ability to upload documentation from outside sources, pharmacy services and log request for information is also available. Standardized protocol and diagnoses for medical and mental health services is available in the MOCIS Healthcare module to assist the caregiver in providing the offender with the maximum care. This new system is web-based, user friendly, has enhanced reporting capabilities and with other improvements should improve efficiency.

Public Online Visitation Web Application

DOC encourages visitation of incarcerated offenders by family and friends as it promotes rehabilitative efforts. In 2012, the department will publish its first public facing online visiting application designed to capture pertinent information necessary for decision-making when granting visiting privileges. Chief benefits include:

➤ A convenient service to our customers with timely submission of online applications

➤ Significant reduction in the staff verification and response time

➤ Data quality improvement afforded by online entry versus hand written applications

Visitation Tracking System

The DOC's new Visitation Tracking system is web-based with many new features. The addition of alert-cautions is designed to enhance safety in facilities. The legacy system required entry of separate applications for each offender pending visitation approval. This is being replaced with one global visitor record that will capture and track all visiting privileges. This feature, in addition to online data integration, will greatly improve staff productivity. Additional features include the functionality of prohibiting certain individuals from entering specific or all facilities, acknowledgment of under-age visitors and victims, address verification through the postal service, enhanced written avenues of communication between staff and a method of capturing visitor photos.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* ELEMENTARY *&* SECONDARY EDUCATION

The mission of the Missouri Department of Elementary and Secondary Education (DESE) is to guarantee the superior preparation and performance of every child in school and in life.

CRITICAL SYSTEMS

School Data

Educator Certification

Grants Management

Adult Learning

2011 ACCOMPLISHMENTS

Educator Certification

Accessible Web-based Activity and Reporting Environment

Highly Qualified Teacher

Grants Management System

GED Transcripts and Payments

PROJECTS

Database Standardization

HQT Enhancements

AT A GLANCE

ONLINE EDUCATOR CERTIFICATIONS

MORE THAN

24,000

CERTIFICATIONS ISSUED SINCE MAY 31

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* ELEMENTARY *&* SECONDARY EDUCATION

New application development by ITSD-DESE occurs in the Microsoft.NET environment and Sharepoint, but there are still Mainframe/COBOL systems in place. There are a number of different database platforms in use including Access, Oracle and Microsoft SQL.

CRITICAL SYSTEMS

School Data
The Missouri Comprehensive Data System (MCDS) allows the public to view a wealth of data on Missouri's school districts and students on the MCDS public website. MCDS also has an internal component for DESE staff and a secure extranet for school districts to view data. MCDS runs on the Microsoft Sharepoint platform.

The Missouri Student Information System (MOSIS) is third party software that allows school districts to upload data to DESE and allows DESE to manage that data.

Educator Certification
The Educator Certification system allows all educators, both new graduates and existing, to submit online applications for certification. This includes the ability for educators and administrators to upgrade certifications and allows schools and districts to access the certification information they need. As of December 2011, more than 24,000 educator certifications have been processed online.

Grants Management
The Electronic Payments and Electronic Grants System (ePeGs) tracks the budget, plans and expenditures for all grants and creates grant payment data. The Payment Management System maintains, processes and calculates the highest majority of all payments made by DESE. The Foundation Formula application is also a system critical for maintaining and calculating the factors involved in State of Missouri payments to LEAs.

Adult Learning
The new GED system, developed in-house on the Microsoft.NET platform, allows individuals, colleges, universities, verifying services and employers to view GED transcripts and individuals to make GED payments. The old GED system, a Mainframe/Cobol application, is used to manage GED applicants. It will be retired in the near future as this functionality is migrated to the new system.

AWARE is third party software that allows Vocational Rehabilitation (VR) staff to effectively track,

coordinate, communicate, analyze, plan and budget complex services for approximately 30,000 Vocational Rehabilitation cases.

ACCOMPLISHMENTS

Educator Certification

This multi-year project was advanced when core system functionality was implemented in June 2011. Following the substitute educator certification module implemented in 2010, this application now allows for all educators to submit online applications for certification, submit online applications for certification, upgrade existing certifications and provide administrators, schools and districts access to certification information. Several new enhancements provide further functionality for the online application process. As a result of this 2011 implementation, the extensive certification paper process is replaced and, upon DESE approval, an official Missouri Educator Certificate is available immediately online, thus avoiding printing and mailing process.

Accessible Web-based Activity and Reporting Environment (AWARE)

A web-based case management and financial system that replaces a system based on paper and lotus notes and results in paper and staff time savings for DESE. While efforts began in 2009, the implementation of AWARE was realized in 2011. The system also allows for communication and coordination with private sector service providers and vendors, as well as providing federally-compliant reporting.

Highly Qualified Teacher (HQT)

The HQT report system provides DESE and the school districts with a reporting system that addresses the data reporting needs for Highly Qualified educators according to No Child Left Behind (NCLB) and appropriately/inappropriately certificated educators according to Missouri School Improvement Program (MSIP) criteria. Recent improvements to the HQT system resulted in more timely and efficient processing of requests with a new interface that allows the public to view an educator's credentials and qualifications for their assignments.

Grants Management System

This project added several grants to ePeGS, the grants management system used by DESE, allowing these grants to be managed in a central system as opposed to local ones of varied efficiency. As a result, over 20 grants were consolidated within one system and standardized on accounting structures, budgets, reporting requirements and planning tools.

DESE.mo.gov Redesign

The DESE website was redeveloped so that information is easier to access throughout the site.

GED Transcripts and Payments

A secure website allowing individuals, colleges, universities, verifying services and employers to view transcripts at no cost has replaced an outdated system of phone calls and paper communica-

tion, saving the state time and money. This is saving the state entities time and money. The website also allows persons to make online payments when requesting a GED certificate or applying to take the GED. This eliminated the need for persons to obtain and send in a money order, but still requires persons to mail an application when applying to take the GED.

PROJECTS

Database Standardization
Databases are being migrated to the Microsoft SQL database environment that will result in standardization across DESE applications. This will make application development and database maintenance less expensive.

HQT Enhancements
Proposed modifications will facilitate enhanced reporting at the individual, school, district and state levels.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* ECONOMIC DEVELOPMENT

The Department of Economic Development (DED) leverages our competitive advantages and delivers strong economic growth for Missouri.

CRITICAL SERVICES

Electronic Job Board

Workforce Programs

Tax Credits

Economic Research

Utility Rates and Hearings

Tourism

2011 ACCOMPLISHMENTS

Auto Suppliers Portal

Missouri State Trade and Export Promotion (MOStep) Website

MissouriCareerSource

Tax Credits

PROJECTS

Industry Portals

Missouri Career Source (MCS)

Missouri Education and Career Hotlink

CMS Reporting Gateway

Workforce Data Quality Initiative

AT A GLANCE

NEW WEBSITES

AUTO SUPPLIER PORTAL

MISSOURI STATE TRADE EXPORT PROMOTION

AWARD OF EXCELLENCE

VISITMO.COM RECEIVES THE BMA'S 2011 B2 AWARD

MORE THAN OVER 500,000 JOB SEEKERS RECEIVED EMPLOYMENT ASSISTANCE

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* ECONOMIC DEVELOPMENT

Web and Application development by ITSD-DED occurs in the Microsoft.NET enviroment in conjunction with a variety of third party software applications for web content management.

The Public Service Commission (PSC), regulates investor-owned electric, natural gas, steam, water and sewer and telephone companies. The PSC remains unconsolidated and houses an IT unit within its organizational structure.

CRITICAL SERVICES

Electronic Job Board

MissouriCareerSource.com (MCS) is DED's Division of Workforce Development (DWD) labor exchange system and public website. It is an electronic job board (much like Monster or Career Builder) allowing employers to post jobs and search for suitable candidates and job seekers to post their resumes and find employment. MCS is also used by unemployment benefit recipients to complete their mandated four week reporting.

- ➢ **Active job seekers (current):** 213,884
- ➢ **Job seekers making a job referral:** 276,111
- ➢ **Jobs openings posted by employers:** 302,560 (from 155,512 individual postings)
- ➢ **Employers posting jobs:** 11,123

Workforce Programs

Toolbox2 (TB2) is the case management system used by DED staff and its Workforce Investment Board (WIB) partners. It allows them to manage the enrollment of job seekers in state and federal workforce programs (for example, WIA, Wagner Peyser, TRA and METP) and track the use of services provided under these programs. This third party Oracle-based software has been heavily customized for use in Missouri. Monthly, quarterly and yearly reports are generated from the data in the system to meet federal reporting requirements

- ➢ **New enrollments in workforce programs:** 643,935
- ➢ **Total number of services provided:** 8,144,313
- ➢ **Job seekers provided a service:** 508,171

Tax Credits

The Customer Management System (CMS) Tax Credit System is used internally to track awarded and redeemed tax credits. Currently all of the state's tax credits are tracked via CMS, with the exception of those belonging to DIFP. There are 60 tax credit programs from six departments in the system.

Economic Research

The Missouri Economic Research and Information Center (MERIC) uses the Workforce Information Database to maintain and update employment statistics, labor market information, business listings and related economic and demographic data.

Utility Rates and Hearings

The Electronic Filing and Information System (EFIS) application is a public, web-based document management system that integrates automated process management, imaging and content management into a central electronic repository for commission cases, complaints, inquiries, tariff/rate case filings, staff reports, commission agendas and orders. The EFIS application accommodates approximately 7,000 internal and external users. In 2011, the system averaged 500,000 visits each month and, on average, transferred 20 GB of traffic per month. Also, in 2011, PSC streamed 110 unique events including; rate case hearings, agenda meetings, local public hearings and non-commission events.

Tourism

The Missouri Division of Tourism's (MDT) website, VisitMO.com is a critical component in Missouri's effort to bring tourists and tourism dollars into Missouri. The website allows users to find desirable attractions and events through an appealing and accessible design.

The website, based on the DotNetNuke platform, is operated by MDT with support from a contracted partner. There are also a number of ways that tourists can interact with MDT through social media. Tourism-related businesses are able to upload profiles and events and market their businesses.

VisitMO.com was honored with an Award of Excellence from the Business Marketing Association's (BMA) 2011 B2 Award that recognizes and honors both the results and designs of projects.

ACCOMPLISHMENTS

Auto Suppliers Portal

A website was launched that promotes Missouri as the best place to expand or relocate a business in the automotive supplier industry. The website is a one-stop shop for information and resources.

Missouri State Trade and Export Promotion (MOStep) website

The MOStep website provides information about the MOStep program and allows Missouri businesses to apply for assistance with international marketing.

Tax Credits

Non-DED tax credit data (with exception of DIFP) was added to CMS (DED's tax credit system) and is now managed within the system.

MissouriCareerSource Enhancements

Several new vendor-supplied online tools that assist job seekers were added to MissouriCareer-Source.com:

➤ **Career Ready 101**: Online assessment and training for foundational skills, vital life-skills such as financial literacy, career exploration, resume writing and interviewing skills and soft skills (i.e. customer service and work habits)

➤ **Optimal Resume**: Helps job seekers build a better resume and cover letter, manage an online portfolio, hone interviewing skills and develop a personal brand online

➤ **Metrix Learning**: online education covering IT, desktop computing, project management and HR skills.

PROJECTS

Industry Portals

Development is underway on seven new industry portals. The portals address the key industries identified by the state's Strategic Plan for Economic Growth and includes industries like "Advanced Manufacturing" and "Information Technology". These portals will promote Missouri as the best place to expand or relocate a business in that industry.

Missouri Career Source (MCS)

The MCS website is being modernized and updated to include more tools and information for both employers and job seekers. One of the new tools to be added will allow employers to search for job seekers matching selected criteria.

Missouri Education and Career Hotlink

This system will be integrated into a new jobs.mo.gov system to provide information on training programs and institutions within Missouri. Job seekers will be able to search for educational opportunities, see which of may be available to them via Workforce Investment Act (WIA) funding and see information about related career opportunities and job prospects in their area.

Workforce Data Quality Initiative

This initiative aims to link together workforce data, wage data and education data to permit longitudinal research. The developed workforce Longitudinal Data Survey (LDS) would serve to inform the decision-making process for adult training and education and workforce professionals, as well as key stakeholders at the state and local levels. A unified data repository and analysis of wage record data, workforce case management systems and training program information from education providers would allow Missouri to accomplish goals in analyzing dislocated worker and non-traditional student data, as well as adult training and education program performance.

Customer Managment System (CMS) Reporting Gateway

A portal will be developed that will allow staff and other CMS users to access the developed SQL Server Reports through a portal that is connected to the existing CMS tax credit system.

Enhanced Enterprise Zone (EEZ) Portal

A new web portal will be developed that allows Missouri residents to view existing EEZ and propose new ones. This product will integrate GIS-based mapping technology to enhance the system.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* HEALTH & SENIOR SERVICES

The Department of Health and Senior Services is the leader in promoting, protecting and partnering for health for Missouri.

CRITICAL SERVICES

Women, Infants and Children

Vital Records

Immunizations

Public Health Event System

2011 ACCOMPLISHMENTS

Public Health Information Exchange

Healthcare Workforce Registration

Health.mo.gov

Healthy Living Podcasts

PROJECTS

Family Care Safety Registry

Child Care

AT A GLANCE

WEB TRAFFIC IN 2011

7.6

MILLION PAGE VIEWS ON HEALTH.MO.GOV
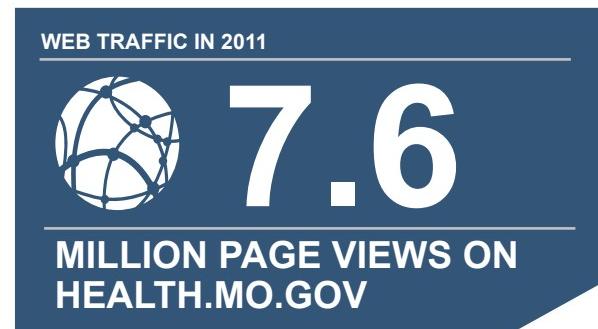
WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* HEALTH & SENIOR SERVICES

ITSD-DHSS developers have expertise working in DELPHi, PHP, and Microsoft.NET systems to maintain and develop the systems that allow the department to perform its core functions.

CRITICAL SERVICES

WIC Information Network System
The Women, Infants and Children (WIC) Information Network System, a data system built on SQL server and Microsoft .NET allows ITSD-DHSS to certify and issue benefits, food and nutrition education, to categorically eligible women, infants and children.

Vital Records
The purpose of the Missouri Electronic Vital Records (MoEVR) system is to support registration of Missouri vital events for the department and other users such as funeral directors, attending physicians, medical examiners and birthing facilities. In 2011, there were more than 74,000 registered births and nearly 45,000 deaths registered in the system.

Immunizations
The ShowMeVax system is a web-based application used by health care providers to view, record and track immunizations in the state immunization registry for clients they serve. There are 1,471 users from 321 health care providers and agencies throughout the state utilizing the registry. It is also used by 1,463 users at 304 agencies and schools to view registered immunizations.

Public Health Event Detection
Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) software is a system that inputs electronic emergency department (ED) data for the purpose of syndromic surveillance. Syndromic surveillance is the use of non-traditional data sources in order to detect public health events earlier than possible with other methods (laboratory confirmed diagnosis or physician diagnosis). Examples of syndromic surveillance data include over-the-counter drug sales, laboratory report orders and absenteeism rates. Missouri conducts syndromic surveillance using electronic hospital emergency department (ED) visits. ESSENCE can also be used for situational awareness during known health events by querying all ED visits for a particular syndrome or by keyword (such as carbon monoxide, animal bite, injury, etc). There are currently over 430 users of ESSENCE throughout the state who are either public health authorities or staff from hospitals that send electronic emergency room data.

ACCOMPLISHMENTS

Missouri Public Health Information Exchange

ITSD has upgraded and retooled the infrastructure necessary to receive real-time electronic public health data from health care providers throughout Missouri. An example of this data being utilized occurred following the Joplin tornado. DHSS staff located individuals on the missing persons list from the emergency room data received in real-time from the hospitals. Another example is providers participating in the data exchange are able to query the state immunization registry for immunization information. Over 26 million electronic messages were processed in 2011 on chief complaint data from emergency room visits. Health care facilities in more than 165 locations are exchanging healthcare electronic messages to submit new records to the state immunization registry, which is utilized by clinicians and school officials throughout the state.

Missouri Healthcare Workforce Registration Exchange

The Missouri Healthcare Workforce Registration Exchange (MoHWoRX) is a web-based health professional's registry that brings together registered individuals and entities with the authority to conduct healthcare workforce activities in Missouri. DHSS has partnered with Professional Registration to obtain registered healthcare workers' information as a working basis for the system. An online registration system for those individuals and entities with authority to conduct activities with controlled substances is also part of the system. These parties can submit an application, pay a fee and a controlled substance registration certificate may be issued. This system also captures disciplinary actions handed down to registrants. The Bureau of Narcotics and Dangerous Drugs (BNDD) requires applicants to submit necessary workforce census data. This data is collected by the Office of Primary Care and Rural Health (OPCRH) to meet federal Health Professional Shortage Area (HSPA) designation needs. The system allows any non-registrants to log on and provide their census information in order to collect and meet current federal, state and local primary care health professional data needs. Currently, there are approximately 28,000 BNDD Registrants, which equates to roughly 800 expiring license renewals each month. Approximately 120,000 licensed nurses to potentially enter census information.

Health.mo.gov

ITSD collaborated with DHSS to overhaul the department's website content. Information was streamlined and presented in a way that is conscious of the general public's health literacy. The department's online services are now main features of the site. The site's domain was changed from dhss.mo.gov to health.mo.gov in an effort to create a memorable brand for Missourians.

Healthy Living Podcasts

DHSS established a series of online podcasts. These brief videos, produced regularly, focused on a variety of health-related topics. The videos featured interviews with subject matter experts, demonstrations and department announcements. Some of the topics highlighted include influenza, healthy eating, food safety, Alzheimer's prevention, Older Worker of the Year contest kick-off, elder abuse and choosing the right insect repellent.

PROJECTS

Family Care Safety Registry

Planning is underway to upgrade the Family Care Safety Registry legacy application to a web-based application. Missouri's Family Care Safety Registry was established by law to protect children, the elderly and the physically or mentally disabled in this state. The system works to promote family and community safety by providing background information on potential caregivers. Approximately 86,000 prospective new caregivers register each year and approximately 300,000 background screenings are processed on caregivers each year.

Child Care

Upgrade the child care legacy application built on DELPHi to a modern web-based application rewritten ASP. DHSS is required to license and monitor child care facilities in the State of Missouri. The application is used to track the facility licensing. Approximately 800 new facilities are licensed each year. There are currently 3,594 licensed facilities in the state.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* HIGHER EDUCATION

The Coordinating Board for Higher Education, the Missouri Department of Higher Education, and the state's institutions of higher education will work collaboratively to support a diverse system of affordable, accessible, high-quality educational institutions that demonstrate student learning and development, encourage and support innovation, foster civic engagement, enhance the cultural life of Missourians, and contribute to economic growth.

CRITICAL SYSTEMS

Financial Assistance for Missouri Undergraduate Students (FAMOUS)

Program Inventory Application

Proprietary Schools Application

Customer Relationship Management System Application

Publications Application

ACCOMPLISHMENTS

FAMOUS Rewrite/Redesign Project

PROJECTS

FAMOUS Student Portal Project

Program Inventory and Degree Search

Technology Upgrade for Security and Program Inventory Systems

AT A GLANCE

A+ SCHOLARSHIP AWARDS

WERE DISTRIBUTED TO OVER 6,000 STUDENTS

WEB TRAFFIC IN 2011

MORE THAN

832,000

PAGE VIEWS TO DHE.MO.GOV
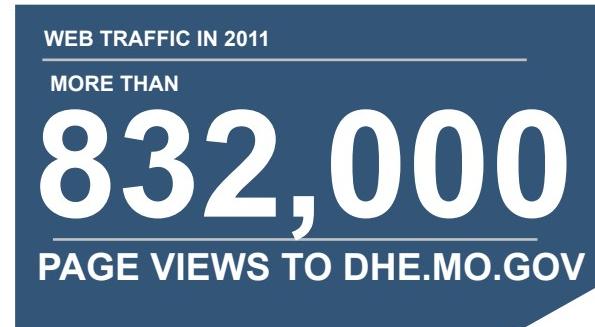
WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* HIGHER EDUCATION

ITSD-DHE application and development support for the Missouri Department of Higher Education (MDHE) focuses on applications that assist the MDHE's Financial Assistance, Outreach & Proprietary Certification Group, the three divisions of the Missouri Student Loan Group, Borrower Services, Collections & Contracts and Marketing & Customer Service and that provide services to the citizens of Missouri and other states and countries who are seeking information about higher education offerings throughout Missouri. ITSD-DHE developers have expertise working in JAVA and WebSphere environment; maintain and develop the systems that allow the department to perform its core functions.

Data assistance is also provided to MDHE's Fiscal Affairs/Data Group and used statewide by educators and legislators and in conjunction with other external data statistics to evaluate trends in higher education such as course popularity, graduation rates, campus location and tuition influence and the overall effect of higher education throughout the demographics of the State of Missouri.

CRITICAL SYSTEMS

Financial Assistance for Missouri Undergraduate Students (FAMOUS)
FAMOUS is used to administer financial aid for Missouri Students attending Missouri's Private 2 and 4 Year, Public 2 and 4 Year and Other Nonprofit Post-Secondary Institutions (PSIs). FAMOUS is used by PSIs to request awards and by High Schools to assist students in preparation for attaining grants and scholarships. Awards totaling more than $79 million dollars for Access Missouri, Bright Flight and Ross Barnett Scholarship Programs were distributed to nearly 60,000 students attending Missouri PSIs for the Fall semester via FAMOUS.

Other less critical systems include:

Program Inventory - course offerings and degree programs from higher education institutions.

Proprietary Schools - student enrollment and student exit information for training and courses.

Customer Relationship Management System Application - This comprehensive and accessible CRM system is used by all internal MDHE staff.

Publications Application - inventory tracking system, an online ordering and fulfillment system.

ACCOMPLISHMENTS

FAMOUS Rewrite/Redesign Project

An analysis project for the rewrite/redesign of the Financial Assistance for Missouri Undergraduate Students (FAMOUS) Application was completed in 2010. That analysis defined a 4-phased approach that spans multiple years.

During 2011 Phase 1 of the rewrite/redesign of the Financial Assistance for Missouri Undergraduate Students (FAMOUS) Application was completed (with the exclusion of a Student Portal application) and includes the following achievements:

➤ The DB2 Database that is the foundation of the FAMOUS application was converted to facilitate new enhancements and improved data organization, ensuring availability of information to meet the requirements for department staff, PSIs, High Schools and students.

➤ The FAMOUS Web Application was migrated off of an unsupported Websphere platform using JAVA SWING GUI to a web application using JAVA JSF and a current version of Websphere.

➤ The High School FAMOUS application used by the Missouri High Schools was migrated off of an unsupported Websphere platform using JAVA SWING GUI to a web application using JAVA JSF and a current version of Websphere.

A+ Scholarship Program Added to FAMOUS Project

FAMOUS was updated in 2011 to incorporate functionality to administer tuition reimbursement for the A+ Scholarship Program. The project included analysis of business requirements, design and development, testing and deployment by the opening of the FALL 2011-2012 semester. Nearing the end of December 2011, A+ Scholarship Awards totaling $7,588,784.23 were distributed to 5,677 Missouri Students attending A+ Scholarship Participating public community college or vocational/technical schools, or private two-year vocational/technical schools for Summer and Fall semesters combined, via FAMOUS; convenient, secure, web-based system. A significant reduction in the verification time and data quality has been realized as a result of the online application.

PROJECTS

FAMOUS Student Portal Project

The Analysis and Design portions of this project to add a Student Portal for FAMOUS was completed during October 2011. Development and Testing are underway and Deployment is scheduled to occur during February 2012. This will complete Phase 1 of the rewrite/redesign project initiated in 2010.

The Student Portal will include the following achievements:

➤ The DB2 Database that is the foundation of the FAMOUS application will be updated to facilitate the Student Portal ensuring availability of information to meet the requirements for

department staff and Students.

➤ Window's Live ID will manage secure login to the Student Portal and rigid authentication routines to ensure data confidentiality.

➤ Provide student access to self-service functions such as award and scholarship information and eligibility, display of FAFSA, ACT and SAT data utilized by the MDHE for eligibility determination, of notices and letters distributed from the MDHE regarding eligibility determination, real-time payment status of PSI requested awards and student-specific eligibility for Access Missouri, Bright Flight, Ross Barnett and A+ Scholarship programs, addition of Post Secondary School choices for the purposes of evaluating estimated awards available at different schools.

Program Inventory and Degree Search
The college degree search available to the public on the MDHE website will be updated to provide improved functionality for users of all devices and will include a mapping component.

Technology Upgrade for Security and Program Inventory Systems
During 2012 the two remaining applications running on an unsupported Websphere platform using JAVA SWING GUI will be migrated to a web application using JAVA JSF and a current version of Websphere.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS & PROFESSIONAL REGISTRATION

The mission of the Missouri Department of Insurance, Financial Institutions and Professional Registration (DIFP) is to efficiently and effectively encourage a fair and open market for consumer service industries.

CRITICAL SYSTEMS

Online Application Checklist

Integrated Regulatory Databases

Insurance Invoicing

Cash Receipts

Taxation

Professional Registration

Optical Imaging

ACCOMPLISHMENTS

Online Application Checklist

Online Exam Development

Online Complaint Verification

Long-Term Care & Medical Supplement Health Insurance Rate Data

Life Policy Locator

PLANNED PROJECTS

Online Application Checklist

AT A GLANCE

PROFESSIONAL REGISTRATION

MORE THAN
93,000

ONLINE RENEWALS IN 2011

WEB TRAFFIC IN 2011

2.1

MILLION PAGE VIEWS ON INSURANCE.MO.GOV

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT OF INSURANCE,
FINANCIAL INSTITUTIONS & PROFESSIONAL REGISTRATION

ITSD-DIFP employs skilled developers who have expertise working in Oracle, Visual Basic and Sharepoint systems to maintain and develop the systems that allow the department to perform its core functions.

CRITICAL SYSTEMS

Integrated Regulatory Database Systems

Insurance's Integrated Regulatory Database Systems (IRDS) is the primary source of data required to support the department's day-to-day administrative functions and processes, including communications with the National Association of Insurance Commissioners to maintain up-to-date information.

Missouri Insurance Division Invoicing System

The Missouri Insurance Division Invoicing System (MIDIS) combines the billing for approximately 12 different types of processes. The system produces, tracks and maintains an estimated 5,000 invoices annually.

Professional Registration (PROMO)

The PROMO system is the division-wide software system for the Missouri Division of Professional Registration that performs licensing and practice review functions for 39 professional licensing boards and commissions which license and regulate the activities of approximately 460,000 individuals representing 240 different trades and professions. This system processed 44,775 applications and 229,823 biennial renewals during 2011. Of those 229,823 renewals, 93,921 were performed through the online renewal portion of the PROMO system.

Optical Imaging System

The Optical Imaging System indexes the data stored in the PROMO system and customizes document retrieval for all 40 professional boards. In addition, the optical imaging system provides for creation of paperless board agendas for all 40 boards. This system is currently a repository for over 17 million images for the Missouri Division of Professional Registration with approximately 1,000,000 to 1,500,000 images being added annually.

Cash Receipts System

The Cash Receipts System tracks and coordinates incoming revenues and reimbursements with invoices and electronic fund transfers.

Taxation Systems

Taxation Systems record, track and process the annual tax responsibilities for Missouri insurance companies, surplus lines producers and captive insurance companies.

ACCOMPLISHMENTS

Online Application Checklist

The Online Application Checklist for Professional Registration allows a licensing applicant a means to check the status of a submitted application online. This resulted in a reduction of phone calls related to the application process while providing a more convenient method for licensing applicants to get information regarding their application.

Online Exam Development

The Online Exam Development project provides a method for administering jurisprudence exams, which are mandated for completing licensure requirements for multiple boards, securely online. The goal of this project is to reduce the work related to administering these exams while providing immediate feedback to the exam taker as to pass or fail status. These exams were paper-based and often proctored at various locations throughout the state. In addition, this project allows the boards to gather statistical information for these exams more effectively and efficiently.

Online Complaint Verification

The Online Complaint Verification project allows insurance companies online access to review and approve/dispute the recorded consumer complaint data against their company utilizing a convenient and secure web-based system. A significant reduction in the verification time and data quality has been realized as a result of the online application.

Long-Term Care and Medical Supplement Health Insurance Rate Data

The Long-Term Care and Medical Supplement Health Insurance Rate Data project created a new system to collect Medicare Supplement and Long-Term Care Health Insurance rate data and requests; perform statistical and actuarial analysis of the data; and provide flexible management, reporting and web posting of pertinent information.

Life Policy Locator

The Life Policy Locator service helps consumers locate benefits from life insurance policies or annuity contracts purchased in Missouri. Individuals who believe they are beneficiaries, as well as executors and legal representatives of the deceased person may submit a search request form.

PROJECTS

Improved Licensure System

In 2012, there are plans to replace the existing licensure system for Professional Registration, which went into production in 1999 and serves all 39 boards. The goal is to update the functionality of the system while providing for a more modular approach in meeting the needs of the individual boards. Improvements would also improve usability for the state's approximately 400,000 licensed professionals by providing boarder self-service functionality.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* LABOR & INDUSTRIAL RELATIONS

Ther Department of Labor and Industrial Relations (DOLIR) works to promote industry and labor and protect the rights and safety of Missouri's workforce.

CRITICAL SYSTEMS

Unemployment Benefits

Unemployment Tax

Workers' Compensation

2011 ACCOMPLISHMENTS

Paperless Conversion

Benefits Application Update

Data Entry Improvements

PROJECTS

Unemployment Insurance

AT A GLANCE

ONLINE COMMUNICATION

MORE THAN 11 MILLION

PAGE VIEWS ON LABOR.GOV

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* LABOR & INDUSTRIAL RELATIONS

ITSD-DOLIR application development occurs largely in the Mainframe/COBOL DB2 environment. There are public-facing Java/Websphere applications that complement those Mainframe applications. Other web application development is conducted in classic ASP.

CRITICAL SYSTEMS

Unemployment Benefits
The Benefits Application is used by the Division of Employment Security (DES) to process unemployment benefit payments to unemployed Missouri workers. The application facilitates prompt payment of unemployment benefits to eligible claimants via direct deposit, debit card, or check as necessary. The application processes Combined Wage Claims (CWC) for unemployed workers who have wage credits in other states, claims for federal workers and former members of the military. The application also manages child support withholding; SSN and alien verification; Form-1099s for claimants; the imaging of paper claim forms; work search verifications and waivers; tax withholding requests; adjustments to claims; confidential information requests; and images documents for divisions and sections within the agency. The Benefits Application also has a benefit payment control (BPC) piece to prevent, detect and recover improper payments. This legacy mainframe-based system is a candidate for modernization when resources become available. Payments in 2011 consisted of the following:

➤ Emergency Unemployment Compensation
➤ Federal Additional Compensation
➤ Unemployment Compensation for Ex-Service Members and Federal Employees
➤ Federal Extended Benefits
➤ State Extended Benefits
➤ Regular Unemployment
➤ Disaster Unemployment Assistance

Unemployment Tax
The Contributions (Tax) Application is used by DES to handle the collection of Unemployment Insurance (UI) taxes from employers in the state. The application provides a means to establish and maintain an account for each employer, calculates tax rates and makes successorship and other liability determinations. The application processes quarterly Contribution Wage (CW) reports, payments from employers, adjustments, refunds to employers and benefit charges. This legacy mainframe-based system is a candidate for modernization when resources become available.

Workers' Compensation
The Automated Integrated Claims System (AICS) is the primary business system for the Division of Workers' Compensation (DWC). The application assists DWC in administering the Missouri Workers' Compensation Law and applicable rules. The application captures images and data from

required documents such as First Reports of Injuries, Claims for Compensation, Answers to Claims for Compensation, Notice of Commencement/Termination of Compensation, medical records and documents relied upon by administrative law judges in approving Compromise Stipulations of Settlement and issuing awards on disputed cases.

ACCOMPLISHMENTS

Paperless Conversion

A number of paper/print/mail complaint processes were replaced with paperless online versions that are now available on the DOLIR website.

Benefits Application Update

The benefits application was updated to comply with new law. The changes restructured the maximum number of weeks payable on a regular state unemployment insurance claim and strengthened penalties for those found to have committed UI fraud.

Data Entry Improvements

The Pre-liability Upgrade Project (PUP), a part of the Unemployment Contributions application, improved the data entry process.

Payment Enhancements

The Unemployment Contributions application was upgraded to allow contributions payments by credit card, making compliance more convenient for taxpayers.

PROJECTS

Unemployment Insurance

 The Unemployment Insurance Modernization (UIM) project will reduce mail costs, decrease paper usage, reduce returned mail, reduce claims processing time and reduce contribution wage report processing.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* MENTAL HEALTH

The Department of Mental Health (DMH) provides prevention, treatment and promotion of public understanding for Missourians with mental illnesses, developmental disabilities and addictions.

CRITICAL SYSTEMS

CIMOR

Claims Management System

Data Warehouse & Reporting

2011 ACCOMPLISHMENTS

5010 EDI Conversion

Inter-Governmental Transfer

Reimbursement Methodology

PROJECTS

Pharmacy System

DMH Electronic Medical Records

AT A GLANCE

WEB TRAFFIC IN 2011

1.7

MILLION PAGE VIEWS ON DMH.MO.GOV

35 MILLION TRANSACTIONS

IN THE 2011 FISCAL YEAR

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* MENTAL HEALTH

ITSD-DMH performs application development in the Microsoft .NET environment and Sharepoint.

CRITICAL SYSTEMS

CIMOR
CIMOR is an information system that manages data for consumers who receive treatment and services overseen by DMH. CIMOR supports state facilities, regional offices and all contracted provider organizations.

➤ Tracks consumers and their information including such things as diagnosis, treatment plans and other critical health care information

➤ Contains all vendor contract information related to consumer care

➤ Creates episodes of care for each consumer, resulting in professional claims submitted to the respective payer for services as rendered by the Department

➤ Submits requests to OA's accounting system for checks due department providers

➤ Provides a warehouse of data used for reporting and data analysis.

➤ Tracks department funding and program expenditures and also serves as a billing system to generate claims for payment

Claims Management System
Claims Management System, or CMS, is an adjutant system to CIMOR. Its function is to create and submit DMH Facility Healthcare Claims to Medicaid, Medicare and Commercial Payers. Unlike CIMOR's internal claims engine which adjudicates only professional claims and works only with Medicaid; CMS is designed to build, submit and reprocess all types of health care related claims: professional, inpatient, outpatient, ancillary and dental claims.

➤ CMS is loosely coupled to CIMOR and uses the same Electronic Data Interchange (EDI) Translation Engine as CIMOR for sending and receiving HIPAA Compliant 4010/5010 Claims and Electronic Explanation of Benefits (EOB).

➤ Builds and submits claims for 34 DMH facilities and can be used to support Provider Billing in the future.

➤ Bills approximately $125 million annually – 14% of the department's total billings.

➤ Is HIPAA 5010 compliant and supports ICD-10 diagnosis coding.

➤ Replaces a number of mainframe and legacy.Net Stop-Gap Applications.

Data Warehouse & Reporting

The data warehouse for DMH consists of several major repositories that provide reporting information important for department decision making.

➤ Data Central, DMH Chronicle, SAM II, Financial Mart which serve many purposes from regularly scheduled reports, to ad hoc single use and audit.

➤ Data Central is the most actively used source for ad hoc, on demand and scheduled reports. The data in this database has been gathered from many sources including CIMOR and other ancillary applications. To make it easier for users and report writers, the data in this repository has been denormalized.

➤ DMH Chronicle gives the users the capability of seeing a snapshot of the data as it appeared on a specific day. This permits the divisions to answer questions such as what happened during a given period of time for specific records, but also provides the raw data from which Data Central is populated and thus the capability to manipulate the data as they wish.

➤ Several other warehouse databases provide detailed information about personnel, billing and claim processing.

➤ All warehouse databases are accessible by users to manipulate and analyze the data according to their needs.

➤ Hundreds of reports provide the information needed to the staff of DMH and staff of private mental health service providers. This information is used to support the activities of doctors, nurses and administrators to provide services to mental health clients and evaluate treatment outcomes.

ACCOMPLISHMENTS

5010 EDI Conversion

The migration from ICD-9 to ICD-10 is a major challenge to all health care providers and payers of services, impacting all facets of health care delivery from diagnosis and treatment to payment and outcomes. In preparation for the transition to ICD-10, all billing systems have been modified to support the ICD-10 compliant 5010 EDI transactions. Private contracted service providers that bill the department directly are in the process of moving to the new EDI formats, with several providers near or in production. The department billed approximately 35 million transactions during the past fiscal year.

Inter-Governmental Transfer Reimbursement Methodology

Inter-Governmental Transfer Reimbursement Methodology System (IGTRM) was successfully rolled out to all DMH, Division of Comprehensive Psychiatric Services (CPS) contract service providers. CIMOR has now replaced all temporary billing solutions implemented during CIMOR's protracted development and deployment, including all legacy billing systems.

PROJECTS

Pharmacy System

The Meta Pharmacy Systems software solution will replace the existing legacy pharmacy software (Quadramed) which is no longer supported by the vendor and is not capable of required mandated upgrades. During 2011, the META software is being customized for Fulton State Hospital which processes 1.9 million doses of medication and over $1.5 million in Medicare Part D reimbursements. Once the Fulton site is completed, the META system will be replicated to the six other DMH pharmacy sites throughout the state.

DMH Electronic Medical Record

In conjunction with MindfulWare, the Division of Comprehensive Psychiatric Services, in consort with ITSD, is implementing an electronic medical records system specifically designed for psychiatric services. Fulton State Hospital and Northwest Missouri Psychiatric Rehabilitation Center are piloting this effort which will be expanded to all Division of Comprehensive Psychiatric Services (CPS) inpatient adult facilities, one children's psychiatric hospital and one children's residential center. This adaptation of Mindfulware's Panacea EMR software will draw selected information from CIMOR and have tailored templates for treatment plans, progress notes and group scheduling to enhance treatment services for the DMH CPS client population.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* NATURAL RESOURCES

The mission of the Department of Natural Resources is to protect, preserve and enhance Missouri's natural, cultural and energy resources.

CRITICAL SYSTEMS

Air, Water, & Soil Quality

Energy Conservation

Environmental Services

Hazardous Waste

State Park Campgrounds

Wells

Environmental Compliance

Solid Waste Management

2011 ACCOMPLISHMENTS

State Parks Website

Corner Master Index

PROJECTS

ePermitting

Sanitary Sewer Overflows

AT A GLANCE

MORE THAN
136,000
ONLINE CAMPGROUND RESERVATIONS

WEB TRAFFIC IN 2011

11.6

MILLION PAGE VIEWS ON DNR.MO.GOV

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* NATURAL RESOURCES

ITSD-DNR performs application and web development on the Java/Websphere platform using the DB2 database. There are also numerous distributed Microsoft Access solutions in place. Other web development is conducted using classic ASP technology.

The Division of State Parks website employs the open source content management system named Drupal.

CRITICAL SYSTEMS

Air - Missouri Emissions Inventory System (MOEIS)
MoEIS is a web-based application that provides information about regulated facilities, enforcement classification, operating permit type and operating status for air quality. The application allows regulated facilities to input emissions data required by the EPA.

Water - Missouri Clean Water Information System (MoCWIS)
MOCWIS (PERMIT) is a web application used by DNR to permit, track and monitor the facilities that have permitted discharges to waters of the state. This application also tracks modifications to the state's water quality standards.

Soil & Water - Missouri Soil & Water Information Management System (MoSWIMS)
The Missouri Soil & Water Information System (MoSWIMS) tracks an annual $26 million cost-share program for soil conservation efforts within the state. Districts process contracts more efficiently and landowners see a faster turnaround on receiving their reimbursement check.

Energy Center - Missouri Weatherization Assistance Program (MoWAP)
DNR's Division of Energy currently manages grant funding dedicated to assisting low-income families weatherizing their homes. The Missouri Weatherization Assistance Program (MoWAP) system allows DNR staff review these invoices and approve payment through SAM II.

Environmental Services - Laboratory Information Management System (LIMS)
The LIMS stores data from sample analysis from Environmental Services Program (ESP) testing of Missouri waterways, air and soil for more than 200 different compounds, including E. Coli. The data is provided to the public via the dnr.mo.gov website and is used to determine waterway/beach closures.

Hazardous Waste - Site Management and Reporting System (SMARS)
SMARS is an application used by the DNR Hazardous Waste Program to register and track hazardous waste sites and clean-up operations across the state. This application is a candidate for conversion to a web-based application.

Campground Reservation System (CRS)

This online transactional system is used by the public to reserve campgrounds within Missouri State Parks and process online payment. *NOTE: This is administered by a third party*

Geology & Land Survey - Well Information Management System (WIMS)

The WIMS application contains information on location, construction and some geology for most wells constructed after October 1986 in the State of Missouri.

Field Services - Assistance Compliance Enforcement (ACE)

ACE is an application that tracks assistance visits to, compliance visits/requests of, inspections and enforcement actions against regulated facilities and entities. This application is a candidate for conversion to a web-based application.

Administrative Services - Fund Projection System (FPS)

FPS is an application that provides DNR the means to plan and anticipate funding for DNR programs throughout the fiscal year.

Solid Waste Management - Fees and Taxes (FAT)

FAT is an application used by the Hazardous Waste Program to track fees and taxes on hazardous waste generators, haulers and others dealing with hazardous waste. This application is a candidate for conversion to a web-based application and expansion to additional programs.

ACCOMPLISHMENTS

Corner Master Index

This year there were significant enhancements to the Corner Master Index system (CMI). CMI facilitates storage and retrieval of Certified Land Corner Document images. CMI documents are now available online.

Long-term Stewardship

This project developed a central Long-term Stewardship (LTS) data warehouse that compiled LTS data from existing department databases and made the data accessible to local governments and the public via an online, GIS-based platform. LTS information for Brownfields/BVCP sites is extracted from the Site Management and Reporting System (SMARS) system and loaded into an Enterprise Data Warehouse (EDW) that will facilitate the future incorporation of LTS information from other DNR' databases. The public is able to view the location of Brownfields/BVCP sites through the Department's Simple Map Viewer and can include this location information in their own maps.

PROJECTS

ePermitting

DNR currently processes Water Protection Program permits in its Central and Regional Offices using a paper application and documentation. DNR staff then enters the information into the Missouri Clean Water Information System (MoCWIS), reviews applicable data and issues the permit manually. The ePermitting project will provide a user-friendly, secure web-based application for the public. The new system will also reduce staff time spent processing applications and issuing permits, provide better integration of application and permit data with existing systems, improve DNR's efficiency in processing permit applications, as well as automate permit application fee transactions.

Sanitary Sewer Overflows

Sanitary sewer overflow, also called by-passing, is the intentional or unintentional discharge of untreated or partially treated domestic sewage from municipal or other sanitary sewer collection/treatment systems. The purpose of this project is to create a new web-based application to manage data related to Sanitary Sewer Overflows (SSO) and bypass incidents. Regional offices currently manage the data in MS Access databases and spreadsheets. Data collection and management tools vary depending on office location. This consolidation and standardization will provide more timely and consistent information. This will assist in decision making and ensure that regulations are consistently enforced. The database will be DB2.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* PUBLIC SAFETY

The Department of Public Safety coordinates with public and private entities to assist with crime prevention and investigation; protect against threats of terror; ensure public safety; and provide emergency response, care and recovery assistance.

CRITICAL SYSTEMS

Emergency Response

Law Enforcement

Alcohol Licensing & Excise Tax Collection

2011 ACCOMPLISHMENTS

Emergency Response Application

SEMA Website

Missouri Criminal Justice Modernization

Water Patrol Consolidation

PROJECTS

Veteran's Cemetery Database Consolidation

Alcohol Licensing & Excise Tax Collection

Veteran's Benefits

Disaster Recovery

AT A GLANCE

NEW WEBSITE

STATE EMERGENCY MANAGEMENT AGENCY

MORE THAN 33 MILLION

EXCISE TAXES COLLECTED

WEB TRAFFIC IN 2011

1.2

MILLION PAGE VIEWS ON DPS & SEMA WEBSITES

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* PUBLIC SAFETY

ITSD -DPS application development occurs on the Microsoft.NET platform. There are AS/400 legacy systems present that will be modernized to the .NET platform in the future.

The Missouri State Highway Patrol (MSHP) and the Missouri Gaming Commission remain unconsolidated and employ their own IT units.

CRITICAL SYSTEMS

Emergency Response
The State Emergency Management Agency (SEMA) Resource Request System is used to enter and track resource requests during a disaster. It is a Visual Basic/.Net application and is scheduled to be replaced by the Emergency Management Reporting system, which provides enhanced functionality. During 2011, this system was used in to manage seven declared events and almost 1,500 resource requests.

Law Enforcement
The Missouri State Highway Patrol (MSHP) provides the Missouri Uniform Law Enforcement System (MULES) to nearly 10,000 criminal justice users statewide. In 2011, this system processed over 80 million transactions, including driver and vehicle license checks, stolen vehicles, missing persons, probation/parole and criminal history.

MSHP's Computer-Aided Dispatch system processed nearly 560,000 incidents that were initiated by calls from the public, or by the officers themselves.

The Missouri Capitol Police (MCP) Computer-Aided Dispatch and Records Management System (CAD/RMS) is a Visual Basic application designed to help dispatch MCP resources to the daily activities in and around the Capitol. During 2011, this system was used to track 41,732 calls and activities.

Alcohol Licensing and Excise Tax Collection
The Alcohol and Tobacco Control (ATC) Liquor License System tracks license information including owners, financial, legal description, violations, tax collection, keg registration, inspections, primary source and more. It is an AS/400 COBOL based system and is a candidate for modernization as resources permit. This system currently tracks 23,456 active liquor licenses. In fiscal year 2011, it was used to renew 21,435 licenses and collect over $33 million in excise taxes.

ACCOMPLISHMENTS

Emergency Response Application

An electronic web-based Emergency Response Application for the State Emergency Management Agency was created to easily access up-to-date situation reports and all resource requests submitted by all jurisdictions throughout the state of Missouri during times of disasters. This application was developed in-house using existing resources to minimize cost in the development. This application will allow SEMA staff to review and consolidate reports and prepare summaries for senior leadership more efficiently. These enhancements will streamline current practices by reducing or eliminating paper processing.

SEMA Website

The new SEMA website can help Missouri's citizens plan and prepare for an emergency. The SEMA website can be updated in real-time during a disaster to provide situation updates and shelter information to the public. SEMA, DPS, MO.gov and social media websites were used in a coordinated fashion by DPS in the aftermath of the Joplin tornado in order to communicate effectively with the public.

Missouri Criminal Justice Modernization

In 2011, all five components of the MCJMP (Missouri Criminal Justice Modernization Project) were implemented and currently support MSHP operations. The five systems include Computer Aided Dispatch, Mobile Computing/Ticketing, State Message Switch (MULES), Criminal History and Records Management System. Additional work on enhancements and customizations continues with new features and refinements scheduled for completion by the end of 2012. These new systems increase efficiency and have expanded capabilities. The biggest improvement is in the reduction of paperwork. This project was recognized with a Governor's Award for Quality and Productivity.

Water Patrol Consolidation Under Highway Patrol

Missouri State Water Patrol and the MSHP were merged into a single organization. The newly created ICTD (Information Communication and Technology Division) assumed control and responsibility for the automated systems used by the Water Patrol. These systems were transitioned to the patrol's servers and converted to meet MSHP standards. Application development work at the Water Patrol, prior to the merger, was completed by ICTD staff and was put into effect.

PROJECTS

Veteran's Cemetery Database Consolidation

Currently, the five Missouri veteran's cemeteries rely on MS-Access databases for tracking the applications and approvals of veterans and their spouses/dependents for burial in a state cemetery. These databases are installed separately at each cemetery with no combined reporting capabilities and are at risk of data loss due to limited backup facilities. A centralized system, created with in-house staff to minimize costs, will be implemented in 2012 to address the data loss risk and to allow cemetery directors to produce all encompassing reports as needed.

Alcohol Licensing and Excise Tax Collection
A new, updated system will enable accurate calculation of taxes for the licensee; easier, more timely collection of payments through a secured website; and better management of information.

Veteran's Benefits
Software will be acquired to assist Veterans Service Officers with providing benefit claims supporting Missouri veterans.

Disaster Recovery
MSHP will also be completing work to establish a disaster recovery site in northwest Missouri, a joint project with MODOT and Conservation.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* REVENUE

The mission of the Department of Revenue is to facilitate the proper functioning of state and local government by accurately and efficiently collecting and distributing state and local revenues and to support public safety by effectively administering laws related to motor vehicle sale and registration and driver licensing. The Department accomplishes this mission by following the law: fostering innovation in its operations; developing cooperative relationships with other public and private entities; clearly communicating with the public; and treating everyone fairly and with respect.

CRITICAL FUNCTIONS

- Collection and distribution of state and local tax
- Driver licensing
- Vehicle titling and registration

2011 ACCOMPLISHMENTS

- Online Sales Tax Filing System
- Missouri Individual Income Tax Fraud Detection
- Enhanced Online Change of Address
- Verification of Lawful Status (VLS)
- .. and more

PROJECTS

- Integrated Revenue System
- Central Issuance Driver License System
- Sales Tax Electronic Filing System Enhancement
- Withholding Treasury Debt Offset Program
- .. and more

AT A GLANCE

MORE THAN TWO MILLION
INDIVIDUAL TAX RETURNS FILED ONLINE IN 2011

MORE THAN $400,000
SAVED FROM FRAUDULENT REFUNDS IN 2011

OVER 3.6 MILLION
REGISTERED VEHICLES IN MISSOURI IN 2011

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* REVENUE

ITSD-DOR supports the Missouri Department of Revenue in performing its core functions, by providing IT services and maintaining JAVA, DB2, COBOL and Microsoft .NET systems for Revenue.

CRITICAL SYSTEMS

Sales and Use Tax

The Missouri Sales and Use Tax System (MITS) processes all sales tax and use tax returns filed by Missouri businesses or companies doing business in Missouri. The system processes electronic and paper returns and payments, completes audit checks on the data filed and initiates the required credits, billings and adjustments as necessary. In 2011, this system processed more than 771,000 returns.

Individual Income Tax

The Missouri Individual Income Tax Systems (MINITS) processes all individual income tax returns. This system merges data received from three electronic sources, performs audit checks and alerts Revenue staff to errors on filed documents. This system issues notices, refunds, billings and adjustments on all individual income tax returns filed. There were more than 3,000,000 returns processed through this system in 2011.

Corporate Income Tax

The Corporate Income Tax System (COINS) processes all corporate income and franchise tax returns. This system accepts data received electronically from various sources, performs audit checks and alerts DOR staff as to any errors encountered. The system produces all billings, refunds, notices and adjustments for all corporations filing tax returns in the state. In 2011, more than 168,000 returns were processed.

Withholding Taxes

The Withholding Tax System (WITHTX) processes all Missouri withholding tax returns. This system produces all billings, notices and adjustments for businesses required to withhold and remit Missouri income tax for their employees. This system also interacts with SAM II to issue refunds on tax overpayments. This system processed more than 1,000,000 returns in 2011.

Driver Licensing

The Missouri Driver License System (MODL) is the central driver license record keeping system that contains license issuance, withdrawal, convictions, suspensions, revocations, disqualifications, reinstatements and status information. The system maintains over 6.8 million driver and nondriver license records. The Missouri Electronic Driver License System (MEDL) is the mechanism for capturing driver and nondriver license applications processed through the Department of Revenue. There were more than 132,000 licenses issued per month in 2011.

Vehicle Titles and Registrations

The Title and Lien system records vehicle and lien information and prints the ownership document for motor vehicles and trailers registered with the State of Missouri. More than 12 million title records were maintained and more than 1.89 million processed in FY2011.

General Registration System

The General Registration System (GRS) maintains the current ownership, titling and registration information for vehicles registered with the State of Missouri. More than 5.9 million vehicle registration records were maintained and more than 3.6 million processed in FY2011.

Title and Registration Intranet Processing System

The Title and Registration Intranet Processing System (TRIPS) is the upfront system for web-based data capture for motor vehicle titling and registration transactions processed through the Department of Revenue. TRIPS also updates the General Registration System. In 2011, an average of 519,000 transactions were processed each month.

Motor Vehicle Online Registration Renewal

The Motor Vehicle Online Registration Renewal System, plates.mo.gov, allows vehicle owners to renew their registrations online. To use the system, an individual must live in a county submitting online personal property tax information and be given a pin number . On average, 12,000 online renewals were processed each month in 2011.

ACCOMPLISHMENTS

Sales Tax Electronic Filing System

The Sales Tax Electronic Filing System (STEFS) went live in 2011 to support electronic filing of Missouri Sales and Use tax returns. Phase 1 of the project allowed businesses with fewer than 150 locations to complete and submit their returns through the web. They also have the option of paying electronically through a link provided on the electronic filing site. Phase 2 of this project is scheduled for implementation in 2012 and will allow larger businesses to file electronically through File Transfer Protocol (FTP). STEFS allows for real-time response with information specific to the businesses using the electronic filing system. Since going live in February 2011, more than 86,000 returns were filed using this system.

Driver License Bureau Online "Most Current" Address Change

This project automated the online driver license "most current" address change submission process. A driver license holder supplies an updated address, online, and the system can now post it to the most current address field in the Missouri Driver License System. The system stores an indicator noting the change came from an online request.

Missouri Individual Income Tax System Fraud Detection

In May 2011, enhancements were made to detect the filing of fraudulent individual income tax returns and prevent fraudulent refunds from being issued. The enhancements produced immediate results:

➤ Fifty duplicate account refunds were stopped and Revenue expects this figure to rise dramatically in 2012 during peak individual income tax filing season (January-April).

➤ More than 4,000 fraudulent returns were identified using information received from other sources (i.e. IRS, other states).

➤ The enhancements prevented more than $400,000 in fraudulent refunds from being issued.

Verification of Lawful Status (VLS)

This system allows license offices to perform online checks to verify lawful status of a non-US citizen by communicating with the US Citizenship and Immigration Service (USCIS) via the AAMVA network. Previously, license offices had to phone in to Revenue to perform the verification.

Restriction of Access to Confidential Records

Missouri and federal law require protection of personal information contained in citizens' motor vehicle and driver license records. In July 2011, enhancements were made to Department of Revenue's Title and Registration Intranet Processing System (TRIPS) to limit disclosure of personal information during transactions initiated within TRIPS.

System Security Updates

Missouri Transportation Accounting System (MTAS) is used for the collection and distribution of all state and local tax jurisdiction revenue that is collected by license offices and the central office. Role-based security functionality was developed and put in place August 14, 2011 that allows Revenue staff to restrict access to authorized users and separate those with view access from those with update access.

Electronic Image Capture of Missouri Driver License (MODL) System Notices

The program automates the capture of two-page notices into the Enterprise Content Management (ECM) system without printing them. This process replaces the old practice of printing the notices and the manual process of imaging and will save an estimated $11,540 annually in printing costs.

License Office Access to Scanned Documents

Provided access to license offices to retrieve images of scanned documents from the Oracle system in order to research title and registration transactions when necessary, instead of contacting Revenue's central office.

PROJECTS

Integrated Revenue System

The department has issued a request for proposal for an integrated tax system and anticipates awarding a contract in the first quarter of calendar year 2012.

The department currently uses a combination of software systems, both mainframe and server based. The most critical of these systems were built on 30-year old technology that is increasingly difficult and expensive to use and maintain. In addition, since the various tax systems were built independently, communication between systems is limited and numerous interfaces between systems are required to allow the systems to communicate at all. Changes are not consistently applied across all systems. The pool of personnel resources with the skills to maintain these old technologies continues to get smaller. The difficulty of timely modification of the legacy systems to incorporate legislative changes and technology advancements will increase over time. The aging systems also limits the department's ability to leverage current technology to realize processing savings or efficiencies.

An up-to-date, integrated revenue system will provide a myriad of benefits for the State of Missouri. Some of the general benefits of a new system include:

➤ Reduced operating and maintenance costs, especially in the area of return processing
➤ Tools that enhance collections management, audit selection and non-filer discovery
➤ Increased voluntary compliance
➤ Faster access to taxpayer data, both by department users and through direct taxpayer access
➤ More frequent data warehouse refreshes, resulting in more accurate analysis
➤ Improved productivity through workflow management
➤ Elimination of business silos, allowing the DOR to view all taxpayer activity across tax types
➤ Better modeling and faster implementation of tax law changes
➤ More reliable data, with better analytical capabilities
➤ Improved customer service

Online Personalized Plate Reservation

Efforts are underway to create a new public web application that allows individuals to view and reserve a personalized license plate configuration. This process will provide individuals with real-time availability requests and immediate reservation opportunity with electronic payment methods. In addition to benefits realized by these individuals, Revenue will see increased efficiencies in reduced mail and paper transactions to be reviewed and keyed.

Withholding Treasury Debt Offset Program (TOP)

This program will allow Missouri to submit withholding debts to the Internal Revenue Service for interception of federal income tax refunds which are then sent to Missouri and applied against outstanding liabilities owed the state.

Central Issuance Electronic Driver License System (MEDL-CI)

This project is redeveloping the current MEDL - OTC (Over the Counter license issuance) system to a central issuance system in which citizens will be mailed the license instead of receiving it while in the licensing office. New technology such as .Net, SQL Server and Windows 7 operating system are being used in the redevelopment . This project includes the conversion of the MEDL System, the Missouri Driver License System and the Central Driver System (CDIS). This project will eliminate three contractors, saving the state more than $360,000 annually in federally funded contractor costs; modernize the legacy MEDL application; save over $1 million for the cost of replacing the antiquated OTC system; and enhance security of the documents issued.

Sales Tax Electronic Filing System Enhancement

Phase two of the Sales Tax Electronic Filing System will allow larger businesses, with more than 150 locations, to file sales and use tax returns electronically using File Transfer Protocol on the website. This final phase will open electronic filing options to all businesses required to file sales and use tax returns with Missouri.

Commercial Driver License Information System (CDLIS) Modernization Project

This project consists of federally mandated major changes to the functionality of the Association of American Motor Vehicle Administrators (AAMVA) CDLIS system, including complete medical certification requirements for all commercial driver licenses

Marine Title and Registration

Marine title and registration application processing will be added to TRIPS. This enhancement automated processing of the transactions, eliminating manual key entry for Revenue staff, and increasing accuracy.

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* SOCIAL SERVICES

The Department of Social Services works to maintain or improve the quality of life for Missouri citizens.

CRITICAL SYSTEMS

Child Welfare

Family Assistance

Child Support

Common Client Area

2011 ACCOMPLISHMENTS

Missouri Work Assistance

Family Assistance Management Information System

MO Rx File Exchange

PROJECTS

Gateway to Better Health

AT A GLANCE

$20,000

SAVED PER MONTH ON SOFTWARE LICENSING FEES

$82,000

SAVED PER MONTH ON CO-PAYS FOR MO RX MEMBERS

WEB TRAFFIC IN 2011

12.4

MILLION PAGE VIEWS ON DSS.MO.GOV WEBSITE

WEB & APPLICATION DEVELOPMENT:
DEPARTMENT *OF* SOCIAL SERVICES

ITSD-DSS application development occurs in the Mainframe/COBOL environment using the DB2 database platform.

CRITICAL SYSTEMS

Child Welfare
Family and Children's Electronic System (FACES) meets the federal requirements for a State Automated Child Welfare Information System (SACWIS). FACES integrates eight separate Child Welfare applications into one seamless system that includes the Child Abuse Hotline, Children's Services, Program Eligibility, Program Authorizations, Family Centered Services, Intensive In-Home Services, Alternative Care, Child Accounting, Common Vendor, Contracts and Licensing and Children Services Payments.

Family Assistance
The Family Assistance Management Information System (FAMIS) is an online eligibility determination system used to gather and record information from Missouri residents who apply and determine what programs and level of benefits they are eligible to receive. FAMIS manages case information for the following Family Support Division (FSD) assistance programs: Food Stamps, Temporary Assistance for Needy Families, Adult Medicaid, Family Medicaid and Child Care. The FAMIS application integrates eligibility determinations and processing for Missouri's public assistance programs into a single system. FAMIS provides efficiency and reduces the burden on the FSD eligibility specialists as they only have to enter information into one system to simultaneously determine eligibility for many programs for a client. The system reduces error rates, saving the state money and ensuring public assistance recipients receive the correct benefit levels.

Child Support
Missouri Automated Child Support System (MACSS) is responsible for collection and disbursement of child support through enforcement of existing judicial and administrative orders; location activities; paternity establishment; establishment of orders; and various other activities. Since implementation of centralized collections, this system distributes child support for all of Missouri's children. It is an AllFusion Gen/Mainframe based system that has been customized for the State of Missouri and requires ITSD staff to ensure that the system is continually updated and in compliance with state and federal statutes and regulations as well as the Missouri Child Support Policy.

Common Client Area
The Common Client Area (DCN) is a centralized repository for personal information that identifies an individual/client. Each newborn/client is assigned a unique Departmental Client Number (DCN), which is used by the Department of Social Services, Department of Health and Senior

Services, Department of Mental Health, Missouri Juvenile Justice Information System (MOJJIS), the Electronic Benefit Transfer (EBT) and Medicaid Management Information Systems (MMIS) vendors. The DCN allows multiple agencies to easily track and coordinate services.

ACCOMPLISHMENTS

Missouri Work Assistance

The ITSD implemented the Missouri Work Assistance (MWA) web-based case management system during June 2011. This system allows the Department of Social Services (DSS), Family Support Division (FSD) and their contractors to manage hours in work readiness programs for 26,000 plus families as required by the TANF program. This system replaced a legacy reporting system with a case management system that is expected to better assist staff working on cases and increase the participation rate of TANF recipients to avoid sanctions by the federal government. The new system is more efficient, user friendly and saved DSS $19,226 per month in software licensing/usage fees.

Family Assistance Management Information System

Calendar year 2011 was the last year for development of the Family Assistance Management Information System (FAMIS) and brings a 17 year development project to a close. The Department of Social Services (DSS), Family Support Division (FSD), received a $1.5M consultant proposal to complete CY11 efforts. However, development was achieved exclusively by ITSD staff thereby avoiding the $1.5M consultant cost.

MO Rx File Exchange

The MO Rx and Pharmacy Co-pays program provides prescription drug assistance to Missourian's in need by coordinating benefits with Medicare's (Part D) Prescription Drug Program. MO Rx members that are dually eligible for both Medicaid and Medicare are required to pay half of the Medicare Part D co-pay for prescription drugs with MO Rx paying the remaining half. Individuals with dual eligibility receiving Home and Community Based Services (HCBS) through a waiver maintained by the Department of Mental Health or Department of Health and Senior Services, however, qualify for zero co-pay on Medicare Part D. ITSD set up an automated file exchange to identify MO Rx members that are receiving HCB Services and are also enrolled in Medicare Part D and transmited this information to the Centers for Medicare and Medicaid Services (CMS) to discontinue the co-pay charges. Based on 2011 Medicare co-pay rates, the file exchange saves approximately 19,500 MO Rx members a total of $81,315 per month in co-pays (an average of about $4.17 per month per member). The MO Rx program incurs an equal amount of savings in co-pay cost avoidance for a total combined annual savings of more than $1.9 million for the state and MO Rx members.

PROJECTS

Gateway to Better Health

Gateway to Better Health is a demonstration project funded by the Centers for Medicare and Medicaid and will be implemented in partnership with the St. Louis Regional Health Commission. The goal is to provide improved health care access and outcomes for uninsured residents in St. Louis City and St. Louis County. The project will redirect $25 million in annual Medicaid Funding to preserve and expand important community health center services in St. Louis' urban core. This project will enhance Social Services' eligibility and enrollment systems by adding a new Medicaid program to provide health care services to citizens in the St. Louis area that have no insurance coverage. The project is expected to help 26,500 to 37,200 clients. Coverage under the demonstration project will be offered July 1, 2012 through December 31, 2014.